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ABSTRACT

This committee report seeks to answer 5 basic questions regarding the future of the University of Massachusetts. These questions are: (1) who will attend; (2) what they will be taught; (3) where they will study; (4) when in their lives they will participate; and (5) how the institution will serve the Commonwealth beyond its students. Briefly the answers to these questions are: (1) the University should provide an education for anyone in the state who desires one; (2) the students should be taught what they want to learn and emphasis should be put on individualized majors; (3) the University should expand and go to the student rather than having the student come to it in many cases; (4) persons of all ages should be allowed to participate in higher education and emphasis should be placed on adult education; and (5) the University should provide a diversity of educational opportunities and institutions for the benefit of the Commonwealth as a whole. (HS)

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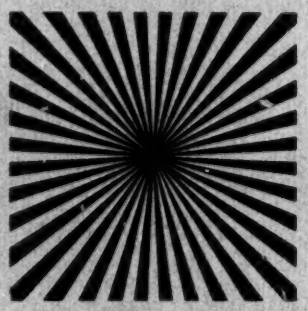
Report of the President's Committee on the Future University of Massachusetts



Boston, Mass. December 1971

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Report of the President's Committee on the Future University of Massachusetts

Boston, Mass. December 1971

The President's Committee on the Future University of Massachusetts

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Table of Contents

Page

Chairman's Transmittal Letter

Preface i

Summary of Findings S1

I. Introduction 1
The Contemporary American University 4
Agenda for Higher Education in the Seventies 6

II. The Accessible University — Who Goes Where? 10
Summary of Major Recommendations 10
The University's Share in Massachusetts Higher Education 13
Guaranteed Opportunity in the Public System 20
Admissions Guidelines 21
Financial Aid 28
Recruitment and Admissions Procedures 31
Skill Development and Other Supportive Services 34
Accessibility Within the University — Campus Size and Location 35
Amherst 35
Boston 36
Worcester 40
Other Campuses 41

III. The Learning Process — What, When, and Where? 42
Summary of Major Recommendations 42
A Diverse Student Body 44
Faculty Views 47
The Freshman Year 52
Undergraduate Learning — A Diversity of Options 56
1. Diversity of Structure 56
Bachelor's Degree in Individual Concentration 57
Re-examining the Content of Majors 58
Problem-oriented Units 58
College III at Boston 61
2. Diversity of Place 64
Field Work in Courses 64

A Year or Semester of Fieldwork 64
University Without Walls 65
The Open University and New Technology 65
3. Diversity of Time 67
Improving the Teaching Ethos for Undergraduates 69
Advising and Counseling 69
New Incentives and Rewards for Teaching and Public Service 72
The University Professoriate 74
Other Staffing Issues 75
The University as a Humane Community 76
Graduate Teaching and Research Activities 79
Professional Education 83
Libraries and Computers 88

IV. Service to the Commonwealth 90
Summary of Major Recommendations 90
The Present Service Capability of the University 91
A Policy for Public Service Activities 93
Priority Areas for University Public Service 97
The Special Obligation of the University to its Neighbors 97
Boston 98
Amherst 100
Government Service 101
Service to the Poor 102
Health Services 103
Education 104
Economic Conversion and Manpower Problems 105
A New Public Commitment 106

V. Organizing for Change 107
Summary of Major Recommendations 107
Decision-making in the University 108
The Board of Trustees 108
Governance on Campus 110
The Role of the President 111
Self-study and Evaluation 112
Program Budgeting 113
The Cost of Our Recommendations 115
Calendar for Change 118
The University and the System of Higher Education in Massachusetts 120

Minority Report of members Clifford, Goodwin and MacDonald 125

Chairman's Transmittal Letter

Dr. Robert C. Wood
President
University of Massachusetts
85 Devonshire Street
Boston, Massachusetts 92109

Dear President Wood:

I hereby transmit to you the report on the Committee on the Future University of Massachusetts. This report seeks to chart some new directions for the University within the clear context of both its historic commitments and its emerging national status.

The ideas and recommendations put forward are intended not as a blueprint but as a catalyst for a process of reevaluation and renewal. It is this process— and not any particular set of answers— that will move the University forward during the decade to come.

I hope the report conveys what my work with the Committee has made very clear: the members of the Committee— all of them— share a deep respect for the values and mission of public universities and a belief in the capacity of the University of Massachusetts to serve these values and fulfill this mission within a framework of educational excellence. The Committee has worked with singular dedication and interest for nine months. Starting from widely varied professional and personal viewpoints, they achieved a remarkable degree of agreement.

If I can be of help in discussing the Committee's recommendations with any of the University's constituencies, I would be very glad to do so.

Cordially,

Vernon R. Alden

Preface

Last December 9, Robert C. Wood was inaugurated as the sixteenth President of the University of Massachusetts. Taking office at the beginning of a new decade, at a time of great stress for higher education and for the country generally, and in a newly created system-wide Presidency located in Boston, President Wood used the occasion of his inauguration to announce the appointment of a Committee on the Future University, to advise him and the Trustees on the nature and direction of the future University of Massachusetts. That Committee herewith submits its report to the President and Trustees.

In appointing the Committee, President Wood wrote each member as follows:

> I regard the Committee's work as a vital step in the wise and timely development of the University of Massachusetts. If the future University is to be genuinely responsive to the future condition of society, all of us who are a part of it will have to think creatively—about the conditions and responsibilities we envision in the future.
>
> As you know, the University of Massachusetts is a youthful one, experiencing its greatest period of growth in the last ten years. That was a decade when the entire educational world was in ferment, and the years ahead promise further decisive changes. In this time of continued movement, I am asking the Committee to consider:
>
> --What principal forces in terms of population pressures, economic growth, technological changes and manpower requirements will play upon the University and what responsibilities will it consequently be asked to assume?
>
> --What changes can and should we anticipate in the University as a community in its style of living and in the working relationships among faculty, students, administration and alumni?

--What changes are necessary and desirable in the content of what the University learns through research and teaches through instruction; and how do we balance the reliable acquisition of knowledge with its humane use?

--How should the total educational responsibility of the state be shared among public and private institutions, and how can these diverse institutions at all levels of higher education better learn to work together for common purposes?

--How do we continue to educate beyond the accustomed years of early adult life, and what arrangements do we make to encourage men and women of Massachusetts to learn and to grow throughout their lives?

--How can the University better serve the state in making its resources available to respond to our collective public needs?

These and other questions need responsible answers in a policy framework. While the Trustees, the Chancellors, the Dean of the Medical School, and I expect to be making specific decisions about institutional growth and change as part of our combined responsibility, we need badly to have the benefit of the detached, experienced, responsible views that you and your colleagues represent. I am sure your contributions will benefit the Commonwealth and its University and higher education in the nation as well.

Our report explores these questions and others that have emerged in the course of our inquiry.

The Committee is a broadly based group, including students and faculty from the University, alumni of the University and other leading Massachusetts citizens of a variety of backgrounds and concerns, and people from outside the Commonwealth who are professionally concerned with higher education. In all, half of the Committee's membership is actively involved in the field of education, and the other half represents a variety of business, professional and community interests.

The Committee has met eight times since last January, mostly in two-day sessions. It has met and talked with national experts in the field of higher education, including people associated with the Carnegie Commission on Higher Education, the Assembly on University Goals and Governance, and the Newman Committee (a foundation-supported Task Force that reported to HEW Secretary Richardson)— the most important national bodies to report on the state of higher education in many years. It has talked with students, faculty members, and administrators from the University of Massachusetts and with citizens from Amherst and Boston who are affected by the impact of the University in their communities. It has had the benefit of staff reports about the issues before it, of the various master plans and committee reports about the University's future that have preceded it, and of an evergrowing library of reading material about American higher education.

Our staff, working with appropriate University officials, designed and carried out surveys of the Amherst faculty and the Boston student body during the spring of 1971. The results of these surveys appear at relevant places in the report. Nearly half the Amherst faculty, an excellent cross-section, responded to the faculty questionnaire; about a fifth of the Boston student body, a reasonably representative cross-section, responded to the student survey.

We conceive our assignment to be to suggest the major directions in which the University might move over the next ten years. We have also tried to set forth some organizational changes that would facilitate this process. We have tried to indicate the present strengths of the University as well as the changes that the coming decade will require. We do not deal with every issue that has been brought to our attention, and on those issues considered, we have not tried to answer every question that would arise in the course of implementing our recommendations. We have tried to consider the main lines of argument on all sides of each issue, and we have tried to offer feasible solutions. Their implementation will rest variously with the Board of Trustees, the President and other administrators, the faculty, the students and the General Court.

Throughout our work there was a continuing discussion over whether we should confine ourselves to stating themes for the future or go into details of models and programs. We were agreed that our report is an advisory document— a beginning, a basis for consideration and deliberation both within the University and outside it. The question was what degree of elaboration would start meaningful discussion and debate without invading the legiti-

mate prerogative of those who have the responsibility and authority to act on the issues we have raised. Although not all of us are wholly comfortable with the middle ground the Committee has chosen, the overwhelming majority felt an obligation to go beyond a brief statement of themes into a carefully limited elaboration of context and direction. We believe the level of specificity we have chosen is appropriate to provoke constructive discussion both on and off the campuses without enroaching upon the role and competence of any relevant group or body.

The Committee had twenty-one members, and there were undoubtedly twenty-one individual views as to just how the report should be written. Consequently, while the overwhelming majority agrees with the report, no single member can be held to a position of total agreement with absolutely every portion of it.

In submitting our report we wish to thank Peter Edelman, the Staff Director, whose insight, hard work, and editorial skill were indispensable to our undertaking. We wish also to thank the other members of the staff who have been enormously helpful throughout: Gerry Studds, the Associate Director; Andrew Nighswander, Michael Deland, Kate Fleisher and Roxanne Miller, Staff Associates; and John Dinkelspiel, Joel Sirkin, and James Holloman, summer staff associates. Roxanne Miller deserves special mention. She typed and retyped the report in its numerous drafts; her efficiency and good cheer were essential to the meeting of all deadlines during the Committee's work.

We are indebted to various consultants for invaluable advice and assistance: William Arrowsmith, Lyman Brainerd, Antonia Chayes, Allen Davis, Elizabeth Drew, David Gardner, Fred Harrington, Ann Heiss, Stephen Kramer, and Lynn Shostack. We want to thank others from outside the University who gave of their time to meet with the Committee: Stephen Graubard, Charles Palmer, Joseph Rhodes, and Virginia Smith; and still others who took time to comment on drafts of the report at various stages: Lawrence Dennis, William Dwyer, William Gaige, Nathan Glazer, William Helm, Marshall Kaplan, Seymour M. Lipset, John Maguire, Louis Menand, David Riesman, David Robinson, and Martin Trow.

We owe very special thanks to Robert Greenleaf and Constantine Simonides for their generous and unfailingly thoughtful counsel, and to Deputy Chancellor Patrick McCarthy of the Board of Higher Education, who sat with us as an observer and contributed a system-wide perspective to our deliberations.

Most important, we wish to thank former Chancellor Oswald Tippo, Acting Chancellor Randolph W. Bromery, Chancellor Francis Broderick, Dean Lamar Soutter, and the faculty, students,

and other administrators of the campuses of the University who gave willingly and unstintingly of their time in informing us about the University and in sharing their hopes and ideas with us. Of particular help throughout were Glenn Elters and Richard Story at Amherst, Richard Freeland at Boston, and Nan Robinson of the President's office.

Finally, it must be said that the responsibility for our conclusions and suggestions is our own. We have had extensive and exceedingly helpful advice and assistance, but we alone are accountable for what follows.

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Summary of Findings

The University of Massachusetts, having already quadrupled in size these past ten years, will more than double again in the next ten. While the era of burgeoning expansion is over for most public universities, the University of Massachusetts, having developed late, is still growing.

In that growth there is opportunity for needed change, especially when the experience of others is at hand to show pitfalls that can be avoided. The key question is, will the University of Massachusetts model itself on the past, producing in 1980 a university which emulates the most admired institutions of the 1960's, or will it help lead the nation to a new model for public higher education in the seventies?

This Committee believes the University of Massachusetts has the capacity to lead toward new standards of quality and excellence. It has grown impressively in stature in recent years and it has tremendous potential. With this report, we hope to increase public awareness of that potential as well as influence the internal sense of purpose and mission of the University. For public trust and support are what ultimately make change and growth possible.

The questions we seek to answer, briefly, are who will attend, what they will be taught, where they will study, when in their lives they will participate, and how the institution will serve the Commonwealth beyond its students.

We begin with the recognition that the institution is both public and a university. The public pays for it, and the public therefore has a right to benefit from it. The public trust depends not just on an informed sense of the University's potential, but also on satisfaction received, and this in turn creates a broad obligation of service both to students and the society beyond.

If the public nature of the University broadens its obligations, its status as a university— an institution for learning— is simultaneously a limiting force. The university is a specific kind of institution entrusted by society with a special responsibility to educate citizens and advance knowledge.

But that formulation, while correct, is no longer sufficient. The role of universities is under debate all over the country. Some say universities can survive only if they assume a new involvement

in the society around them. Others maintain that such involvement would destroy the effectiveness of universities in freely pursuing and creating new knowledge. Accepting fully that universities are institutions of limited mission and competence, we nonetheless choose to stand with the first group. We believe universities should be responsive rather than disengaged, appliers as well as creators of knowledge, questioners as well as conservers of values.

Five key concepts summarize our recommendations for the University of Massachusetts:

- Accessibility to able students of all income levels, races, national backgrounds, and ages.
- Diversity of academic program, and of place and time of learning, to make the University truly responsive to the needs of students and society.
- Undergraduate teaching as a special priority, coupled with re-examination of how best to achieve this priority while sustaining the vital research and graduate teaching functions of the University.
- Service to the public beyond the enrolled student body, including continuing education and application of the University's faculty and student resources to assist in the solution of perplexing problems of public and social policy.
- Productivity in the use of resources, to see that scarce funds produce the greatest educational results, with special emphasis on new approaches to cooperation and coordination between public and private colleges and universities, and among public institutions of higher education.

These five themes suggest a new model for the public university in America — one defined by its stronger emphasis upon the quality of the undergraduate learning experience and service to society. This will require changes in admissions policies, educational programs, academic organization, and administrative priorities, and — not least — will require additional resources from the Commonwealth.

If the last decade was a period of emergence of the University of Massachusetts from the shadow of the private colleges and universities in the State, the next will be a time for assuming a full statewide role and enhancing an already substantial national reputation.

By 1980 the University should have 50,000 full-time and 15,000 to 20,000 part-time students. Its campuses should be sharply different from one another: Amherst the primary place for advanced training and the more residential campus; Boston an urban and more professionally oriented center, with a pre-

dominantly commuting student body and greater opportunities for part-time study, for older students, and for students from low-income families; Worcester as the campus for health professions and health sciences, accommodating a substantial number of undergraduates.

ACCESSIBILITY

Who should come to the University in 1980? This is a key question. The opportunity for higher education has not yet been extended to all who should have it. Ability knows no lines of income or race. A public university, especially, has an obligation to all the citizens who support it, to say nothing of its obligation to facilitate mobility as part of the American commitment to equal opportunity.

The need for university training knows no boundaries of age. More than ever, for reasons both professional and personal, lifelong learning should be a major aim of a university's program.

The University's student body has consistently been more representative of lower income people than public universities around the country, and in recent years it has also done a creditable job in recruiting, admitting, and financially assisting black students.

Nonetheless, the family income level of its student body is rising more rapidly than family income in the State. From all indications, these regressive trends will continue unless affirmative steps are taken. As to accommodating older students, as yet the University has not undertaken any substantial effort or program.

We therefore recommend that the University take whatever affirmative steps are necessary in its admissions, recruiting and financial aid policies to ensure a fully representative student body, and to that end we make the following major recommendations:

We recommend that the University adopt guidelines to judge the success of its admissions policies in serving low-income and increasingly hard-pressed middle-income families. At a minimum it must strive to maintain its present income distribution— at Amherst, 23.4 percent of last fall's entering class were from the lowest income third of the State's population, and 35.4 percent were from the middle third; at Boston, 38.8 percent of the student body last year were from the lowest third, and 36.1 percent were from the middle third.

Beyond this, through intensified recruiting and new techniques of selection, we believe Amherst could without sacrificing quality seek to ensure that a third of its students are from the lowest income third of the population.

In addition, we recommend that the University pay special attention to serving groups historically discriminated against or severely underrepresented in the University. While this includes such groups as blacks, Puerto Ricans, and American Indians, it is not limited to them. Ninety percent of the poor in Massachusetts are white, and many belong to ethnic groups which have been especially victimized through the years.

We also recommend the formulation of guidelines to test the University's success in recruiting older students, and in serving women and transfer students.

We recommend that the University adopt, and the Legislature fund, financial aid sufficient to support the kind of student body we suggest. This is crucial. The President and Trustees have already decided to ask the Commonwealth for an additional $4.5 million for financial aid for fiscal 1973, a step we strongly support. We estimate that State support for financial aid to needy students will have to increase each year to a total of $20 million per annum by 1980 in order to achieve our goals. In addition, if the effort to attract low-income students is to succeed, present tuition should not be increased until an expanded financial aid program removes financial constraints as a barrier to attending the University.

We recommend that the University adopt new admissions criteria in order to maximize the accessibility of the institution to the groups we have mentioned without jeopardizing its commitment to excellence. The majority of students should be admitted according to a formula based solely on rank in high school class or grades. A substantial minority should be admitted according to individualized determination based on such factors as interview, judgment as to exceptional talents and potential, and recommendations. A process of individualized determination will be as important for large numbers of older students as it is for many low-income students.

We recommend, further, new recruiting measures to reach into high schools around the State, particularly schools previously under-represented, and into public agencies, corporations and other places where potential older students may be found. We also recommend skill development courses for all students who need special assistance with basic skills like reading, writing, speaking, and mathematics. Additional funds should be included in the fiscal 1973 budget to ensure the necessary support for administering these

recruiting and skill development activities.

We recommend that public higher education as a whole move as soon as possible toward a system of open admissions which guarantees an opportunity for higher education to every Massachusetts high school graduate or equivalent who desires it. We believe there is no other way to ensure that the barriers to equal educational opportunity are removed. It is not physically possible or educationally desirable for the University to have an open admissions policy, but public higher education as a system should adopt the concept of open admissions as its standard.

In terms of the physical accessibility and characteristics of the University and its individual campuses, we make the following major recommendations:

In order to promote the physical accessibility of learning and the possibility of community service, we recommend that the plans for the Columbia Point campus be modified. Columbia Point should be developed not as the sole UMass/Boston, but as the nucleus of an urban university system which is dispersed throughout the Boston area.

Most of the University's Boston programs should be based at Columbia Point, but many should be available in other parts of the community, too. The present facility at 100 Arlington Street downtown should be retained. In addition, UMB should offer classes using the facilities of high schools, public agencies, businesses, and other colleges; contract with corporations, public agencies, museums, hospitals, and other outside agencies to offer programs partially at these locations; develop course offerings which utilize new technological possibilities; and establish experimental two-year satellite campuses especially convenient to low-income students.

We recommend that the restudy and redesign of the physical plans for the Boston campus begin immediately so that an appropriate mix of building at Columbia Point and program development elsewhere can occur with little disruption. The restudy should include attention to the problem of transit facilities to enable students to get to Columbia Point, and re-examination of the decision not to build any student and faculty housing on campus.

We recommend that growth at Amherst be slowed over a period of years and finally stopped at a ceiling of 25,000 students, and less if possible. The size of the Amherst campus makes it increasingly impersonal to students, difficult to administer, and deleterious in its impact on surrounding communities. We wish to emphasize further that the remaining growth resources available to UMA will be extremely precious, and we recommend that they

be concentrated on efforts for educational innovation and change.

We recommend that the teaching hospital at Worcester be constructed as soon as possible. The teaching hospital is important to the program and prestige of the Medical School; further delay in building it will seriously hamper the school's development.

ACADEMIC ISSUES

What students should learn in the coming years, and how, are at the heart of considering the course of the future University. It is inappropriate to attempt to prescribe a detailed curriculum for the future, but to deal with changes in process without considering questions of purpose would be equally inappropriate. So it is that we feel a clear obligation to suggest some new academic directions.

The complexity and weight of knowledge in a technological society are such that education must concentrate more than ever on such ends as analytical skills, the capacity for self-knowledge, the critical examination of values and social institutions, the fostering of aesthetic sensitivity, and the ability to deal with knowledge as a matter of process rather than specific content. These observations apply both to the arts and sciences and to professional programs.

At the same time, teaching and research need to respond more to contemporary social problems, bringing to bear the perspectives of the past, of theory, and of creativity that are especially the resources of universities, and applying those resources not only to the here and now, but also to help anticipate and bring to public attention the problems that will trouble society in the future.

The need to produce graduates who are prepared to contribute to the solution of immediate problems and the need to teach process more than specific content may be seen as contradictory. They are not. Rather, they imply a new agenda for the seventies: a priority on the creation of carefully designed professional programs (and adaptation of existing ones) which offer both practical competence and the perspective and values traditionally associated with the liberal arts. It is in the creation of this mixture of liberal arts and professional studies that we see a major challenge for the seventies.

The academic thrust of the University should give greater relative weight and prominence to undergraduate studies, with a diversity of programs, places, and times to learn that is consonant

with the needs and requirements of an increasingly diverse student body and a complex society. In this major reorientation, the University's most effective research and graduate teaching functions, so vital to its identity and to society, must not suffer.

Toward a new diversity and an undergraduate focus, we make the following major recommendations:

We recommend the development of a new freshman year curriculum, together with greatly intensified advising and counseling services for freshmen and a greater share of University resources applied to the freshman year. Freshmen, who are going through a difficult period of adjustment, are in the largest, most impersonal courses, and receive insufficient personal attention outside of class. A careful re-ordering of the freshman curriculum is needed, to strike a balance between those who need structure and those whom it stifles, and to offer courses which provide a more effective introduction to various areas of knowledge and ways of learning.

We recommend a greater diversity of program for the rest of the undergraduate years, including:

- More options for independent study, including expansion of the individually designed major at Amherst and institution of such a major at Boston;
- Introduction of new problem-oriented learning units on the Amherst campus, in such areas as environmental and urban studies, where disciplinary lines have repeatedly been crossed in the past by scholars and teachers;
- A College of Public and Community Service on the Boston campus; and
- A change in the master plan for Boston which now contemplates the development of six colleges of equal size. Additional colleges at UMB should be different from one another in their focus, and primarily professionally or problem-oriented. There might therefore ultimately be more than six colleges and they need not be the same size.

We recommend diversity in the place of learning, including:

- Expanded opportunities for field work in courses;
- Opportunities to spend a year or semester in the field for credit, like the federally sponsored University Year in Action program which the University is currently entering into and which we strongly support;
- Encouragement to the further development of the University Without Walls, a 17 college experiment in flexible learning, especially suitable to invalids, prisoners, the

geographically remote, and students who work best on an individual basis;
-Partial dispersal of the Boston campus; and
-In cooperation with other public and with private institutions, development of an "open university" unit for Massachusetts, whereby institutions can offer programs and courses through a combination of mailed materials, television or videotape, and tutorial/seminar at satellite learning centers. Even if an open university is not developed, the University should proceed to explore the potentiality of applying new technology to its methods of teaching and learning.

We recommend diversity in the time of learning, including:

-Deferred admission as a standard option for all freshmen accepted at the University, and reservation of places for people who apply after having been out of high school for a time;
-Encouragement of dropping out and coming back in as students feel the need for a break in their formal education;
-Allowing students to go faster and slower than the standard course load, taking more courses some terms and fewer in others, finishing more quickly or more slowly, and particularly being able to acquire a B.A. in three years if they so desire;
-Development of new combination degrees, wherein for example, 3 years of undergraduate work and 2 years of graduate work would lead to a master's degree; and
-Re-examination of the length of all programs, especially the time required to obtain the Ph.D. and advanced professional degrees, with a view to shortening the total required time.

We recommend a number of underlying structural changes that are essential to an increased emphasis on undergraduate teaching. These include:

-A revamped and vastly enlarged system of advising and counseling, with a greater incentive to faculty participation, and an invitation to junior and senior students to join in the advising process. A budget increase of the magnitude of $1 million or more in fiscal 1973 will be required to support this added effort;
-Changes in the faculty reward system to make it explicit that a faculty member may make his or her primary contribution in one of the three areas of teaching, research, or service, with competence to be shown in each

of the other areas as well;

- Development of a system of teacher evaluation to permit responsible and effective operation of the changed faculty reward system;
- Establishment of a "university professoriate," a cadre of scholars whose primary contribution will be in the area of undergraduate teaching;
- Leadership by the University in stimulating cooperative study of current issues regarding tenure, seeking perhaps some modification that would protect academic freedom but also allow an opportunity for periodic professional evaluation of a faculty member's continuing effectiveness;
- Provision of additional resources for support staff for faculty, including secretarial support in particular;
- Changes in staffing patterns, including hiring of more women and minority group faculty, and greater use of adjunct faculty from the worlds of the professions, business, government, and the community; and
- Adequate support for library and computer facilities throughout the University.

We recommend that the graduate and research activities of the University, in both the arts and sciences and the professional areas, be examined to see how they can contribute more effectively to an enhanced undergraduate focus, including:

- A policy of excellence through selectivity in the graduate area of arts and sciences, e.g., strengthening programs of unusual academic promise and those where there is undeniable need;
- Measures to improve the teaching capability of teaching assistants and, more broadly, measures to make a University of Massachusetts graduate degree in the arts and sciences just as credible for the teaching excellence of its recipients as for their scholarly achievements;
- Involvement of undergraduates in research activities to the maximum extent possible; and
- For the present, limiting development of arts and sciences graduate programs at Boston to the Master's level.

We recommend that special attention be given to new programs in professional education at Boston and Worcester, and that the existing professional schools at Amherst examine their programs to ensure that they are exposing their students sufficiently to broad humanistic values at the same time as they are imparting career skills.

Achievement of an undergraduate focus within the University also depends on recognition that learning is facilitated by the

extent to which the University is a humane community. We recommend, therefore, that changes be made in dormitory living and learning at Amherst, and efforts at improving ambiance at Boston be undertaken, including:

At Amherst:

- -More classes taught at the residential level;
- -Experiments in modifying physical arrangements in dormitories, e.g., removing or moving walls, to make them more livable;
- -Further decentralization of administration and decision-making regarding dormitory life;
- -Expansion of the age range of dormitory residents; and

At Boston:

- -Development of an arcade of stores and other facilities at the Columbia Point campus to facilitate development of an outside-of-class communal life;
- -A re-study of whether to build limited housing on campus; and
- -Greater efforts at integration of the life of the University with that of the surrounding communities.

PUBLIC SERVICE

In addition to a sharpened undergraduate focus, we believe heightened attention to the public service responsibilities of the University is indispensable to development of a model for public higher education capable of winning and sustaining broad-gauged public support. These responsibilities include technical assistance and research which help government and industry and others solve specific problems, and continuing education through short courses and conferences to provide in-service training and skill upgrading to government, business, and professional personnel.

The University's activities in this area now are a welter of uncoordinated efforts by individual faculty, by the various centers and institutes (which are located mainly at Amherst), and by the Cooperative Extension Service.

In the matter of public service the first need of the University is adequate knowledge of its own activities, those of other institutions, and the needs of the Commonwealth.

Second, the University needs permanent, high level staffing in the President's office and on the campuses to be responsible for coordinating public service activities and seeing that the right people are being served in the most effective ways.

Third, the University needs guidelines to govern its public service efforts. Public service activities should in large part be carried out by the faculty and students of the University, and should be related as closely as possible to the academic process. Some additional professional staff is essential for coordination, but a large infusion of new non-faculty personnel to actually perform service activities is not only unnecessary but also undesirable for the educational process. Public service efforts must be of value to the University at the same time as they serve society. If a particular activity does not create new knowledge, apply existing knowledge innovatively, or enhance faculty or student development, it is highly questionable whether the University should be involved in it.

Fourth, the University should seek additional funds to support public service activities, for essential staff and for service to groups which cannot afford to pay. The majority of service efforts should be self-supporting, but many essential projects will be impossible without investment of University resources.

We recommend that the University devote priority attention to service activities in six major areas: special attention to the University's neighbors, especially in Boston; service to government agencies; service to the poor; health service; elementary and secondary education and other areas of public higher education; and economic conversion and manpower.

The matter of the university's immediate neighbors is extremely important. Adequate high-level staff must be developed at UMass/Boston to enable policy planning in conjunction with the people of Columbia Point and Dorchester on the full range of issues of mutual concern. We would stress particularly the University's responsibility to help develop plans and marshal resources for increasing the housing supply in Dorchester in order to prevent the University's arrival from disrupting the local housing situation. We also urge renewed efforts by the administration at Amherst to consult the surrounding communities on relevant issues and to offer technical assistance in meeting the public policy problems of the area.

ORGANIZATIONAL CHANGES

Our policy recommendations depend on some matters of structure as well. Needed change within the University will be facilitated by:

-Changes in governance on the campuses, including greater involvement of students in the exercise of authority and responsibility on issues where they have a legitimate interest;
-Re-examination of the role of the Board of Trustees to orient its work as much as possible to the most important issues of long-term University planning and policy;
-Establishment of ongoing self-study and evaluation mechanisms in the President's Office and on the campuses, to facilitate academic change and help judge the effectiveness of the University's program; and
-Institution of a program budgeting system to enable the University to decide in a more informed way among the many competing demands for resources.

COSTS

We estimate the additional costs entailed by our recommendations, over and above currently foreseeable expenditures, to be from $6 to $7 million in fiscal 1973. These needed budget additions will pay for increased financial aid, improved advising and counseling, planning new academic programs, additional faculty, support staff for faculty, library and computer development, new staff and activities in the public service area, and planning and implementing an "open university" unit.

THE UNIVERSITY AND HIGHER EDUCATION IN MASSACHUSETTS

The University will find it hard to define its own role in the State so long as the missions and roles of the various levels of public higher education remain as undifferentiated and undefined as they are now. The promise of the Willis-Harrington Act of 1965 to bring order and definition to public higher education has never been fulfilled. The present master planning efforts of the Board of Higher Education will help, but it is also essential that leading public higher education officials in the State develop means for agreed upon delineation of boundaries and for cooperating in the application of resources.

Similarly, the University's future is complicated by the difficul-

ties in which many private colleges and universities now find themselves. In our judgment, the University has a responsibility to take the initiative in developing new means of public-private coordination and to assist in the development and public acceptance of an appropriate plan to make public resources available to the private sector. The Commonwealth will be served best in years to come by a diversity of educational opportunities and institutions. In its own best interest as well as that of the public, the University has a leading role to play in fostering and maintaining that healthy diversity.

Introduction

The sixties were a time of great and rapid change for the University of Massachusetts. Its enrollment nearly quadrupled, as did its budget and faculty. More than seventy new buildings were built. Library resources nearly quadrupled. Faculty salaries doubled. So did the number of graduate programs. Special efforts to enroll black students were begun. New research programs were established in computer science, polymer science, and marine science. New service centers came into being, in labor relations, water resources, and governmental services.

A single, rural campus founded in 1863 became a multi-campus system with the addition of the urban campus in Boston and the medical school in Worcester. The emerging system was granted fiscal autonomy by the legislature during the decade, and with the enactment of the Willis-Harrington Act in 1965 joined the state and community colleges, and Lowell Tech and Southeastern Massachusetts, in a formalized structure of public higher education in the Commonwealth.

Ever brighter and more able students have come to the University. Ever more distinguished faculty have been recruited. In area after area, the University's programs have received national recognition. Between 1965 and 1970 the University of Massachusetts' graduate programs improved more than any other educational institution rated by the American Council on Education. Wherever one looks, in the liberal arts or the professional schools, in psychology or physics, in engineering or education, change has taken place—there are new faculty, new programs, a variety of separate paths and options available to students.

Thus the institution which we have been asked to evaluate is large, complex, and impressive. By the fall of 1971 its enrollment exceeded 25,000 students and its faculty numbered more than 1,600. The University spent more than $110 million on its operations during the fiscal year which ended June 30, 1971, of which somewhat more than half was provided by the state legislature. Its capital outlay program is the largest of any public institution or agency in the Commonwealth, with over $200 million of construction under way, and more to come.

Its three campuses are each very different from the other. The Amherst campus, which for a century was the Universi-

ty's only campus, has over 20,000 students this fall. Four-fifths of its students are undergraduates, the rest graduate students. About half the students and two-thirds of the faculty are in the arts and sciences, with the rest distributed among the seven professional schools and one independent department. In addition to offering a reasonably full array of graduate and undergraduate programs in the arts and sciences, graduate and undergraduate education is offered in the professional areas of agriculture, business, education, engineering, home economics, nursing, physical education, and public health.

Amherst is a residential campus, About two-thirds of its undergraduates and some of its graduate students live in dormitories on the campus, and most of the rest live in apartments and other housing in nearby communities.

The campus is large and mostly new. Among the buildings built over the last ten years are a 28-story library, an 11-story campus center, five 22-story dormitory towers, and literally dozens of other classroom and office buildings, laboratories, and dormitories.

Ninety-five percent of the undergraduates come from the Commonwealth of Massachusetts. Slightly more than half of the graduate students are from the State. The campus has traditionally served a somewhat lower income population than public universities around the country and comparable private universities in the Commonwealth. The student body is 96 percent white and 4 percent black, with a few individuals of other racial minorities.

The total cost of attending the Amherst campus is now about $2,000 a year, including board and room and all fees.

The Boston campus, which opened in 1965, has about 4,500 students this fall, none resident on the campus. Nearly all are undergraduates. The academic program is largely in the arts and sciences, with the usual variety of undergraduate concentrations offered.

The student body contains a higher percentage of lower income people than the Amherst campus, and is somewhat more diverse racially and ethnically. Tuition and fees total about $400 a year.

The campus is now located in a number of buildings in downtown Boston. A new campus is under construction at Columbia Point in Boston, the first segment of which will be ready for occupancy in the fall of 1973. The present master plan for the Boston campus provides that it will have 15,000 students by 1980—12,000 undergraduates and 3,000 graduate students. According to this plan, these students will be divided into six semi-autonomous colleges, 2,000 undergraduates and 500 graduates in each college.

The Worcester campus is the new Medical School of the University. Planned throughout the past decade, it opened to students in the fall of 1970, with 16 first-year students. It has 24 more first-year students for a total student body of 40 in the fall of 1971. In addition to a full Medical School student body of 400, it is contemplated that other programs in the health and related areas will be developed, and that the Worcester campus will have 5,000 students, including undergraduates, by 1980.

While the University of Massachusetts shares many of the problems common to public universities across the nation, it has opportunities which others lack. Because Massachusetts was so well endowed with private institutions, its commitment to public higher education developed late, and the University has consequently not yet grown to its full potential. The chance for further growth makes change within the University more possible and presents an opportunity to learn from the mistakes of others. If Berkeley, perhaps the most prestigious American public university, is in trouble, the University of Massachusetts can seek to find out why, and plan accordingly.

The growth of the University of Massachusetts in the sixties has placed it in a position of emerging national stature. The men and women under whose leadership this reputation has emerged deserve great respect and admiration. It is precisely because of their achievements that we believe the University of Massachusetts can lead the nation in responding to the evolving demands of the seventies.

We congratulate the people of Massachusetts on having provided so well for the growth of public higher education in the State over the past decade. But the task is not complete. The backlog of demand and the projections for needed further growth are such that a great building process still lies ahead. It would be tragic if the task so well begun were left undone.

At the same time, the social forces that played upon higher education in America through the 1960's are changing, in some ways fundamentally. It is therefore the intent of this Committee to support not just increases in the quantity of higher education in the Commonwealth, but also changes in focus and quality that must occur if the University is to respond to the new decade and serve the needs of the Commonwealth and its citizens.

It is our intention in this report to outline a set of goals and directions for the University for the coming years that will help generate a renewed sense of public trust that the University belongs to the people of the Commonwealth and is serving them, inspire a renewed sense of purpose and mission within the University, and instill in the elected leadership of the State a renewed

confidence and shared vision that the University deserves full and unstinting support in the years ahead.

THE CONTEMPORARY AMERICAN UNIVERSITY

American universities have made a remarkable contribution to our national life. Their research has been at the heart of American technological development. Their scholarship has been admired throughout the world. Their growth has enabled them to offer millions a path to upward mobility. When the need was to assist the development of farming and mining, and to extend education to the children of the farmers and the miners, universities were there. When the need was to develop a new professional and business cadre to fuel the American economy, universities were there. And when the need was for scientific accomplishment to ensure national survival, universities were there.

But times change, and in these times, universities have not yet been as responsive or creative as history would lead one to hope. Whereas in the past the needs of the nation were relatively simple and clear cut, the delineation of needs is far more difficult now, the pace of change far more swift, and the range of demands made upon universities far broader.

It is therefore not surprising that, in an age when technologies change twice a decade and careers are founded and go into oblivion within half a generation, universities are only now beginning to act on the view that higher education is other than a one-time process to be experienced immediately after high school. Nor is it surprising that, in an age when technology, communications, and social awareness have combined to make learning possible in a variety of ways and places, universities are only beginning to respond to perspectives beyond the classroom and the campus.

Universities have grown to enormous size, with single campuses serving thirty thousand and more students, in contrast to half a century ago, when a five thousand student campus was regarded as gigantic. With size has come sameness, wherein all large universities seem to offer more or less the same courses taught in about the same ways, and loss of community, wherein students find it difficult to identify with the university and participate in its processes. Size also reflects the salutary fact that universities have opened their doors to more and more young people, but conceals the number who later drop out and do not come back, as well as the number who stay only because they see no other

way or time in their lives to get the credential society says they need to obtain a job.

Significant portions of the diverse and sometimes conflicting constituencies of universities are dissatisfied with them. Some, mainly children of the affluent, rebel at what they perceive as regimentation and institutional rigidity, while others, children of the working class, want no detours on the route to upward mobility, and chafe at any disruption. Numbers of alumni and parents view the current campus as a shaggy conspiracy to reject the values of the hearth, while the shaggiest of students are sometimes those trying most earnestly to recapture the sense of community which alumni recall so nostalgically. What some young people view as dissent and experimentation, elected officials see as radical unrest and drug abuse. Parts of the faculty see the community of scholars crumbling, while dissatisfied students complain that university activities are irrelevant to contemporary America. Administrators feel public and legislative support for universities is waning, while some legislators and taxpayers, pressed by competing demands, no longer receive university budgets with unquestioning pride and acceptance.

There is a crisis of public confidence in many American institutions, and the university is no exception. Indeed, some would argue that the reform of higher education will not solve campus tensions or re-engage student interest so long as the country is so deeply divided over fundamental issues of foreign policy and national priorities. In such a climate, it would be easy to say there is little universities can do, and to terminate one's efforts without further inquiry.

Yet precisely because other institutions are faltering, this Committee believes universities have an obligation in the seventies to define for themselves a new activism comparable to the great missions they have successfully undertaken in the past. We are mindful of the finite nature of any institution, and of the dangers of promising more than can be delivered. But we believe strongly that well within the boundaries of its traditional missions to create and transmit knowledge and serve society, the American university can do much more to erase social injustice and to involve its talent for research and its capacity for service in the controversies that swirl around it.

AGENDA FOR HIGHER EDUCATION IN THE SEVENTIES

If the comparatively late development of the University of Massachusetts has created a special opportunity for the future, it also results in a certain freedom from the burdens of the past.

If other public universities have become giants, both as individual campuses and as systems, U Mass at Amherst is only now feeling the effects of size, and the three-campus system is still a fledgling structure. If other public universities have moved away from their historic mission of serving those who could not afford private education, U Mass is still serving lower-income students better than most. If other public universities are questioning some of the research they did on government contract in the past and are looking for resources to fill voids left by loss of federal funds, U Mass was never so deeply involved in what some have called "the research mess," and now needs to search neither its conscience quite so deeply nor its pocketbook so sorrowfully. If other public universities have experienced controversy and confrontation that have left residues of bitterness and rancor, relationships at U Mass among faculty, students and administrators are still substantially unpolluted and constructive, and morale is quite high.

Thus the University of Massachusetts is more fortunately situated than most to begin responding to the evolving agenda of the seventies. What are the items on that agenda?

First, if the fifties and sixties were decades of vast expansion of opportunities for higher education, the seventies should be the time to make access universal, to create opportunities for all who want a higher education experience, regardless of their age, race, or background.

Changing technology and changing customs are such that more jobs than ever now require special skill, and a higher education credential is posed as a barrier to entry into many more that do not. While we oppose the latter trend, and believe that all institutions of higher education should direct their energies to defeating false credentialism, we underscore their corresponding responsibility to ensure they are not barriers to upward mobility and job attainment.

The pace of technological change is an equally important factor here. The 1960 engineering graduate finds, for example, that his formal training has little to do with his present activity. Whether the field is medicine, law, teaching, business, science, or social work, there is no longer such a thing as a given body of professional knowledge, a single career to pursue for a lifetime as

originally learned. The steady increase in leisure time as the work week gets ever shorter is another factor. People will be seeking guidance in aesthetics, literature, the arts and a variety of other areas.

These trends mean that higher education in the seventies must be lifelong and universally available. But universities can and should take only a fraction of those who seek higher education; there are various institutions for people of various talents and interests. Nonetheless, as a public university selects its share, it has a special obligation: to reach out strongly and affirmatively so as to ensure that it serves in full measure those who have not been fairly or fully served in the past.

Second, the learning process in the seventies must reflect the complexity of society, its technology and its problems. In the public university especially, this means creating a somewhat more professional and more problem-solving orientation to learning, stressing that learning is a process as much as it is a matter of acquiring specific knowledge, and making learning available in different places, at different times, and through different technologies.

There are new things to know, new facts, or in some cases recently discovered facts, of American life to cope with professionally and personally, problems which are particularly in need of competent people to work at them, problems where a sense of values and a sense of process are as important as the specific content of a job: technology and automation, computers and television; urban decay, environmental pollution, poverty, racism, and the quest for peace; the pervasive size and frequent unresponsiveness of institutions—governments, corporations, hospitals, universities, trade unions.

These matters, joined with the continuing quest for excellence in traditional fields of inquiry, are a major challenge to the university of the seventies: the seeds of new career training, of new areas of inquiry for scholarship and research, of new public service possibilities.

If these matters are the problems of society, they are the problems which students see as well. And if they see a university which seems not to be making an effort to teach and learn about these problems, they see a university which they will dismiss as irrelevant. Perhaps more than ever, the time young people spend at a university is a time for self-discovery and discovery of how things work or how they don't, a time to seek identity and individuality, to find their own particular way of relating to the world beyond.

If students see that black Americans still face unemployment

rates double the level in the white population, and then find nothing in their university about that, they will wonder. If they see that the distribution of income in the country has not changed in twenty years, and then find nothing in their university about that, they will wonder. If they see that questions are being raised throughout the country about corporate, municipal, and individual behavior in polluting the environment, and then find nothing in their university about that, they will wonder. If they see the nation deeply divided over its involvement in a war in Southeast Asia, and then find nothing in their university about that, they will wonder.

We believe the public university cannot avoid or overlook these matters in its teaching and learning. It has so much to contribute to our collective knowledge about the pressing issues that are troubling the country.

Universities should be prepared to address their students in some new ways as well. For if there are new things to know, there are worthwhile new ways—and times—to learn. In addition to reading textbooks, students can learn by doing, by working productively in agencies and schools and hospitals and businesses as part of their learning experience. In addition to coming to campus for lectures, students may be engaged through new technology, through the media of television or videotape cassette, or by working at home or in local study centers with newly packaged course material. In addition to learning from professors whose careers have been primarily within the University, students can learn from people who are dealing with the problems operationally, whether in business or government or in the community. In addition to those students who will study for four or more years right after high school, many students should be free to consider taking time off before they come to college, and taking time off as they go along, reaching for formal learning as they experience the need to know what a regimen of daily work cannot provide.

Third, the public university must develop new ways of serving the people.

Throughout the Cold War period, as during the total mobilization of World War II, universities did the research the government paid them to do, much of it socially beneficial, but some of it unrelated to the educational mission and quite possibly contrary to the open and humane character of the university. College after college awakened in the late sixties to having helped create slum conditions in its own neighborhood, having failed to create equal employment opportunities at all levels within, and having never thought carefully about the social behavior and

responsibilities of corporations where endowment was invested.

If universities, and particularly public ones, want to renew their public trust, they must re-examine their pattern of service to the rest of society. For a state university, the first obligation is a statewide response to the policy and practical needs of the State. Continuing education will have to be re-examined and broadened and extended to people it has not served. The research and technical assistance services of faculty can and should serve the needs of the state, local communities, business, and community organizations more effectively than they have in the past. And universities will have to pay closer attention to their impact on the communities immediately surrounding them, too.

Fourth, universities will have to pay far more attention than they have in the past to issues of organization and efficiency. If all the members of a university community do not share appropriately in the responsibility of decision-making, the emerging and constantly evolving agenda for higher education will have less chance of being effectuated there. If students, in particular, have no voice or responsibility in decisions that affect them, they will be justified in questioning the seriousness of other societal appeals for their participation in wider electoral processes.

The structure of decision-making is, of course, intimately related to, and influential upon the way resources are allocated and applied within a university. The recession in our national commitment to tackle social issues adequately has hit universities, too, and they are finding it necessary to stretch their dollars further. They are no longer viewed as uniquely essential; they have to compete with rapidly growing demands for public assistance, elementary and secondary education, law enforcement, housing, transportation, and a variety of other essential public services. While public universities have numerous unmet needs, many have in recent years won an increasing share of the state tax dollar, and it is by no means out of order for them to examine with a new measure of care the benefits which each dollar buys. Universities will have to adopt more sophisticated budgeting techniques, and explore to the fullest the possibilities for using new technologies to save money as well as promote educational opportunity, and for new forms of cooperation with other institutions of higher education, both public and private.

We believe the University of Massachusetts has a special opportunity to fulfill this four-point agenda for the future, and thereby to lead the nation in creating a new model for public education in the seventies.

The Accessible University - Who Goes Where?

SUMMARY OF MAJOR RECOMMENDATIONS

- The University should have 50,000 full-time students and 15,000 to 20,000 part-time students by 1980.
- Public higher education, including the state and community colleges, should as a system move as quickly as possible to guarantee an appropriate opportunity for higher education to every Massachusetts high school graduate or equivalent who desires it.
- The University should take whatever steps are necessary to ensure that its student body is fully representative of the low-income population of the Commonwealth, and fully accessible to minority groups and older students. These steps should include admissions guidelines to judge the effectiveness of admissions policies, greatly increased financial aid, new recruitment and admissions procedures, and increased supportive services for students once they come to the University.
- Plans for Columbia Point should be reformulated to create a University centered at Columbia Point but also the nucleus for a system dispersed throughout the Boston area.
- Growth at Amherst should be slowed over a period of years and then stopped at a ceiling of 25,000 students, or notably less if possible.
- The teaching hospital at Worcester should be constructed as soon as possible.

An important achievement of American higher education over the past twenty years has been its phenomenal growth— its accommodation in 1971 of almost four times as many students as it served in 1950. In a society in which colleges and universities are the main certifiers for an increasing array of careers, the growth of higher education has enhanced the life opportunities of millions.

For all of the growth, however, the task of extending equal opportunity remains unfinished.

Low-income and minority young people have been the last to be reached by the explosive expansion of higher education. Strong

affirmative action— in recruiting, financial aid and supportive services— is still needed, and will be needed for some time to come, to afford them an equal educational opportunity.

There is a new agenda, too: the task of extending educational opportunity to the millions of Americans who were left behind when they were eighteen, and the millions of others who need or want help in adapting to the consequences of changing technology. Indeed, some observers see the day when the budget for older students will be half of the total higher education budget.[1]

These two matters—equal opportunity and lifelong learning —are one focus of our discussion and recommendations in this chapter. The others are the questions of who will go to the University of Massachusetts as opposed to other institutions of higher education, public and private, and where they will go within the University.

As the costs of higher education have soared in recent years and financial support, both public and private, has eroded, a backlash against continuing expansion of higher education opportunities has begun to develop. One hears more frequently now a reprise of the old song that college is really not appropriate for everyone. This refrain carries no threat for those who can voluntarily choose— those who have the money but need help in escaping family and peer pressure to go to college. But for those who still face the traditional barriers of poverty and poor earlier schooling, it can amount to a denial of opportunity.

This Committee believes the nation needs more higher education before it can think about less. The country needs to move toward universal access to higher education before it can focus any major energy on differentiating between those who should have more and those whose potential will not be stifled if they have less. No matter what changes the future may hold, colleges and universities are among the principal channels to upward mobility in America.

Although we do not accept the premise that competence is measurable only by a college credential, as long as colleges and universities are society's certifying agents for many careers they must take pains to be sure that certification is equally available. They should at the same time help in every possible way in removing unnecessary credential barriers to employment and creating more ways to demonstrate competence, and they can show the way themselves by relying less on previous credentials in their own admissions processes. Simultaneously, they also have a continuing

1. Thurman J. White, "Adults: From the Wings to Center Stage," in Higher Education for Everybody, ed. W. Todd Furniss (Washington: American Council on Education, 1971), p. 174.

fundamental obligation to the still unfulfilled goal of equal opportunity.

The application of a policy of equal opportunity to the University of Massachusetts is informed by the two words which define it as an institution: public and university. Its student body should be commensurate in talent and potential with a university level institution. And because the University receives a large subsidy from the taxpayers, it should place great emphasis on serving those who need the subsidy the most— those with talent and potential who cannot afford a private university education.

These axioms have guided the University historically, but as it grows in prestige and stature and as private institutions become more costly, there is real danger that the increasing competition for places will undercut the historic mission of serving low-income students.

The University of Massachusetts is not alone among public universities in facing this situation. Competition has stiffened everywhere, and those with better preparation, often the affluent, suburban student, tend to win out in the competition. The University will have to make a conscious effort during the coming years of increasing demand if it is to preserve its traditional roots of public purpose.

Added to recruitment and admission of low-income and minority students should be conscious efforts to bring older students into the University. This year alone, several national commissions and task forces on higher education have stressed the obligation to older students.

The report of the Assembly on University Goals and Governance states:

> "Men and women of all ages— and not only late adolescents and young adults— need to think of the college or university as a place they can turn to if they can benefit from the kind of learning environment it provides . . . . Some young persons should be encouraged to defer higher education; some may prefer to avoid it altogether . . . . When higher education ceases to be regarded as the unavoidable prescription for young persons and becomes instead the considered choice of men and women of all ages, voluntarism in relation to admissions and attendance will grow."[2]

The Newman Report, the work of a privately constituted task force with cooperation from the U.S. Department of HEW, takes

2. The Assembly on University Goals and Governance (Cambridge: The American Academy of Arts and Sciences, 1971), p. 7.

the same view of age isolation in colleges. It calls the age exclusionary practices "educational apartheid," and strongly recommends far greater age flexibility in admissions than now obtains, pointing to the high motivation:

> " . . . . common to the doctor who realizes his training has become obsolete; the blue collar worker who never went to college but whose aspirations and self-confidence rise; the welfare mother who has taken part in a Head Start program and now wants a professional career; or the returning serviceman who has found himself and seeks a place in a society he finally recognizes as complex."[3]

These reports all urge, in short, that colleges and universities reconstitute themselves as educational institutions for individuals of all ages. They all emphasize that older students should be fully integrated with the "normal age" students, and accepted in sufficiently generous doses so that there will no longer be a "normal age," but rather an open door to all motivated people capable of benefit from the academic curriculum offered.

THE UNIVERSITY'S SHARE IN MASSACHUSETTS HIGHER EDUCATION

We have said that the University's response to these needs is informed by the fact that it is a university and that it is a public one. What does that mean in Massachusetts?

The following tables place the University in the context of higher education in the Commonwealth.

TABLE I [4]

ENROLLMENTS IN MASSACHUSETTS HIGHER EDUCATION, FALL 1970

	Total	Full-time	Part-time
All Students	303,038	210,123	92,915
Public Institutions	114,022	74,688	39,334
Four-year	79,018	54,423	24,595
Two-year	35,004	20,265	14,739
Private Institutions	189,016	135,435	53,581
Four-year	171,901	120,294	51,607
Two-year	17,115	15,141	1,974

3. Report on Higher Education (Dept. of HEW, March, 1971), p. 9. One of the major themes cited in Less Time, More Options, a report by the Carnegie Commission on Higher Education, was the need for opportunities for higher education throughout people's lifetimes, not just immediately after high school.

4. The source of the figures in Tables I, II, and III is Opening Fall Enrollment in Higher Education, 1970, Report on Preliminary Survey (U. S. Dept. of HEW, 1970). All the tables exclude students in non-credit adult education courses, students taking courses at home by mail, radio or television, and students enrolled only for "short courses." Id., p. 82.

TABLE II

ENROLLMENTS IN MASSACHUSETTS UNIVERSITIES, FALL 1970

	Total	Full-time	Part-time
All Students	133,297	92,820	40,477
University of Massachusetts	24,989	21,996	2,993
Boston College	10,956	8,837	2,119
Boston University	25,124	17,792	7,332
Brandeis	2,940	2,880	60
Harvard	18,465	13,216	5,249
MIT	7,557	7,198	359
Northeastern	38,000	15,999	22,001
Tufts	5,266	4,902	364

TABLE III [5]

ENROLLMENTS IN THE MASSACHUSETTS STATE PUBLIC SYSTEM, FALL 1970

	Total	Full-time	Part-time
All Students	110,398	72,648	37,750
University of Massachusetts	24,989	21,996	2,993
Massachusetts State Colleges	42,505	26,114	16,391
Regional Community Colleges	31,380	18,225	13,155
Lowell Technological Institute	6,987	3,332	3,655
Southeastern Massachusetts University	4,537	2,981	1,556

What these tables show is that the University is one quite modest part of the higher education picture in the State. Its students constitute only 8 percent of the total number of students in higher education; only 10 percent of the number in 4-year institutions, public and private; and only 22 percent of the number in public institutions.

The figures make it clear that the University does not have and cannot have an obligation to everyone who wants higher education, and that, concomitantly, not everyone who wants higher education represents an appropriate opportunity for the University. As we recommend below, the public higher education system as a whole should move toward "open admissions," but

5. The totals are less than those for public institutions in Table I, because three locally administered public community colleges are omitted.

the University's responsibility is more limited: to recruit and admit an appropriate cross-section of those students who are interested in its programs and qualified to do its work.

In the past the University, and public education generally, played an even smaller role in Massachusetts. As late as 1955 only 10.3 percent of students in higher education in the State were in the public sector.[6] By the fall of 1970 the public institutions enrolled 37.6 percent of those who were in higher education in the State,[7] but this is still small compared to the nation as a whole, where 75 percent of college and university students are now in public institutions.[8]

Reflecting the changes in the relative roles of the public and private sectors in Massachusetts, there has been a spectacular increase in the size of the public sector. In ten years the state system has grown from 17,190 students in 16 institutions to 74,002 in 29 institutions: from 6,371 at the University to 22,851; from 8,373 at the 11 state colleges to 26,652; from 151 at one community college to 17,850 at 13 of them; and from 2,295 at the technological institutes to 6,650.[9]

The late development of public higher education in Massachusetts had four consequences.

First, the State was among the leaders nationally in sending its young people elsewhere to be educated. While this is changing, Massachusetts remains among the top twenty states in the percentage of its college-bound residents who are educated outside the state.

Second, many thousands of young people had no opportunity for higher education. No one knows how large the gap was, but it reinforces the State's special responsibility to make higher education more widely available now.

Third, while its effort now is impressive, the State was for years last in the nation in per capita spending on higher education and is still 49th.[10]

6. Higher Education Enrollment Study for Massachusetts, Board of Higher Education (1969), p. 65.

7. See Table I. supra. Massachusetts residents going to school in the State are more likely to be in public colleges and universities. Nearly half the State's residents attending college in the State are in public institutions. See Financial Problems of Massachusetts Private Higher Education, Report of the Select Committee for the Study of Financial Problems of Private Institutions of Higher Education in the Commonwealth of Massachusetts (1969), p. I-4.

8. Opening Fall Enrollment, supra, p. 4.

9. Fourth Annual Report of the Chancellor, Board of Higher Education (January, 1971), p. 3. These figures should be compared with the figures for full-time students in Table III, which are somewhat, but not significantly, different. The Board of Higher Education omits part-time students from its enumeration. This raises another problem. It is essential for budgetary and planning purposes to know the full-time equivalent number of students at each institution. So far as we could determine, however, these figures are not gathered in any central place on a regular basis.

10. In fiscal 1970, for example, Massachusetts State appropriations were $16 per capita for higher education, as opposed to $31 in the United States as a whole. Only New Hampshire, at $15, spent less. Warren W. Willingham, Free-Access Higher Education (College Entrance Examination Board, New York, 1970), p. 205. In fairness, it should be pointed out that Massachusetts has also been fifth in the nation in terms of rate of increase in higher education spending over the past 10 years. Fourth Annual Report of the Chancellor, supra, p. 4.

Fourth, and most serious, a shortage of places in public higher education persists: Each year the University of Massachusetts turns away as many as 3,000 Massachusetts residents whom it considers qualified.[11] If these young people are turning instead to the state and community colleges, they are increasing the pressure for already tight spaces. The community colleges, for example, are turning away nearly as many students as they take,[12] or some 7,000 to 9,000 Massachusetts residents a year.[13]

In summary, the past and present shortages of places in public higher education and the continued low public spending on higher education compared to the nation as a whole suggest that more remains to be done on the public side in Massachusetts.

The unmet need is inescapably large. Projections of future institutional growth and student demand bear this out. The most commonly cited projections are those done for the Board of Higher Education in 1969, which estimate 1980 student demand at 524,000 total places (full-time and part-time combined, resident and non-resident combined) and 1980 supply (as projected by existing institutions) at 411,000 places.[14] The demand projection is divided into 216,000 public and 308,000 private; the supply projection is divided into 188,000 public and 223,000 private.[15]

These projections, especially the one placing total student demand at 524,000 places, are probably on the high side, but not unduly.[16] It should be emphasized, however, that 1979 and

11. For the class which entered in the fall of 1970, UM/A had 18,519 applications, of which 8,513 were accepted and 3,571 came. Annual Report of the Admissions and Records Committee, Sen. Doc. 71-034 (April 1, 1971), p. 4. Admissions officials at Amherst advised our staff that, in addition to the 8,513 accepted, there were another 4,000 applicants who were qualified, about half of whom were from within the State. On the Boston campus 6,000 applied, 3,000 were accepted and 1,300 came. Another 1,500 who were qualified were turned away; there is no indication how many of these were from within the State. UM/B Admissions Report, 1965-70, The First Six Years (March 1, 1971), p. 7. The foregoing figures form the basis for our estimate that the University as a whole is turning away 3,000 qualified Massachusetts residents a year.

12. This estimate is based on conversations between our staff and that of the Board of Regional Community Colleges.

13. This figure, which is in effect an estimate of the shortage of supply of places in the public sector, is consistent with work that has been done to estimate unmet demand for places in higher education. A study done for the Board of Higher Education suggests that ten percent of the high school graduates in Metropolitan Boston each year—four thousand young people—want to attend college and do not. Arthur J. Corazzini and Associates, Higher Education in the Boston Metropolitan Area: A Study of the Potential and Realized Demand for Higher Education in the Boston Area (1969), p. 12. On a statewide basis, the extension of Corazzini's figures would suggest an excess demand of perhaps 6,000 to 8,000 a year.

14. Higher Education Enrollment Study for Massachusetts, supra, pp. 9, 10, 11.

15. Id., p. 71. Since all the figures are total headcount, and do not contain any full-time, part-time breakdown, they offer no FTE estimate upon which budget projections could be based.

16. The overestimate stems from the fact that, to approximate very roughly the number of older students who will be involved in higher education, the BHE's researchers expanded the age base for projected attendance from 18-21 to 18-24. This immediately expands the 1980 student pool from 432,800 to 748,600. Id., p. 83. The 524,000 total is 70 percent (69.542 percent, to be exact) of 748,600, id., p. 60, a percentage which is derived from historical trends, id., p. 56, but, unfortunately, historical trends with reference to a smaller age group. The authors are quite explicit about pointing out that this is a grossly over-simplified approach. Id., p. 55. Thus, the 524,000 total may not be totally incorrect since we do expect a great expansion in the number of older students, but it derivation is not at all sophisticated.

1980 will be the peak demand years for some time thereafter. The number of 18 year olds in the country and state will decline steadily beginning in 1979, and will not begin to climb again for most, if not all, of the succeeding decade. If adequate, the 1980 supply of educational opportunities will remain adequate for the foreseeable future.

The figure of 216,000 students as the projected demand in the public sector in 1980 has been used frequently by the Board of Higher Education. It is probably more accurate than the overall 524,000 demand estimate because the private institutions are unlikely to be able to bear much of the load of needed growth. They would undoubtedly be willing to expand their capacity if they had the resources to do so, but their current and foreseeable financial problems may keep them from reaching even the 223,000 level of supply which they projected for themselves in response to the Board's enrollment study. The capacity of the private institutions has grown only from about 180,000 to about 190,000 students over the last four years, and it is difficult to see where they will acquire resources of the magnitude necessary to enable them to do much more than hold their own.

Within the context just described, the 50,000 student level which the Board of Trustees of the University of Massachusetts has used from time to time for itself is not unrealistic. Without a crystal ball, we nevertheless recommend that the University plan not only for 50,000 full-time students in 1980, but also for an additional 15,000 to 20,000 part-time students. With the increased 18 year old population in 1980, the increased percentage of 18 year olds who will graduate from high school, the increased percentage of high school graduates (or equivalents) who will want higher education, and the older student needs which we perceive, the University will have no difficulty finding 50,000 qualified full-time students and 15,000 to 20,000 qualified part-time students. In fact, we estimate the University is already turning away enough qualified students to have 4,500 more undergraduates in the student body right now.[17]

The size we project for the public university is not difficult to defend in relation to the current prospects of private higher education. An increasing share of the population cannot afford the rapidly increasing charges of private institutions. Consequently, private institutions will probably be unable to accommodate many more people in the next decade, particularly those who need fin-

17. Even if only half the 3,000 qualified Massachusetts residents being turned away annually would come if accepted, that would mean 1,500 more freshmen a year. Assuming half graduate, and that there is a steady attrition rate throughout the four years, there would be 4,500 more undergraduates in the student body at any one time.

ancial aid. Unless the private sector receives public funds on a larger scale than is now predictable, the public institutions will have to bear the brunt of providing educational opportunity to those who are less able to pay, and this will include students from hard-pressed middle-income families as well as those from low-income backgrounds.

The appropriate future size of the University also depends on the projected growth of the other public institutions.[18] This will remain a complex problem. Implicit is the issue of what makes an institution a university rather than something else.

One difference is reflected in the research and service missions of the University. Its research and service activities should be more complex and far-reaching than those of the other public institutions, partly because its faculty tends to be more highly trained and more distinguished, and partly because these activities tend to receive relatively more public recognition and support in the University than they do in other public institutions.

A second difference, following from the first, is in the scholarly competence and distinction of the University's faculty. A university tends to attract scholars of greater potential or accomplished competence because of the opportunity for interchange with distinguished faculty already there, the relatively greater research resources it can offer, and the more able student body it presents for them to teach. It should have faculty members with national and even international reputations for research and scholarship. Not all members of a faculty can fulfill this standard, but some proportion of the men and women in all departments should be people who have achieved or will achieve recognition beyond the borders of the state.

A third difference is in the kinds of students served. The university unit or units in a public system should on the whole have a more able student body than the non-university units. It should have those students who will benefit most from rubbing shoulders with the distinctive personnel at the University, both scholarly and service-oriented. Of course, many applicants who meet university standards will choose a state or community college because it is within commuting distance or because its program is of greater interest.

18. The relative growth of the state and community college system vis-a-vis one another is difficult to project. Various projections which have been made are quite divergent. The BHE enrollment study projected 50,000 students in public two-year colleges by 1980, Higher Education Enrollment Study, supra, p. 61, while the Board itself, without any explanation, projected 83,788 students for the public community colleges, Fourth Annual Report of the Chancellor, supra, p. 8. The enrollment study projected a total of 166,000 students in public four-year colleges (including the University) by 1980, while the Board, again without explanation, projected 132,222. These disparities point up the lack of communication and mutual planning within the public system, a matter we shall discuss further.

All units in the public system should have a greater concentration of low-income students than their private counterparts,[19] and we believe this in turn argues strongly for offering a higher proportion of professional programs than do private institutions. The less affluent students attending the public university and other public institutions are likely to be more career-oriented as undergraduates because they cannot wait through years of graduate school to start earning money or because they have differing expectations about higher education. The latter point, of course, is a reason why public institutions should offer a fair measure of the liberal arts, too. The differing expectations of low-income students can and do change, and the institution's program must be prepared to accommodate those changes.

There is a fourth difference between the University and other institutions— the kinds of programs offered. A university will offer only certain options as it responds to the needs of its students. Its professional programs should include those of special intellectual complexity and leadership potentiality which are not offered elsewhere in the public system: lawyers, engineers, doctors and scientists, specially trained government administrators and community service professionals. This would not preclude the teaching of other professions, but criteria of intellectuality, skill and prestige should inform the choices as to which ones.

The University should also be the institution which offers the most advanced graduate work in the liberal arts, and undergraduate programs in both the liberal arts and the professions should be enhanced by their proximity to the research and scholarship activities of a university faculty.

Of course, there will be overlaps. Both the University and the state colleges train teachers, and other professional and liberal arts programs will overlap as the state colleges broaden their mission. Also, the community colleges offer programs which correspond to the first two years at the University or at a state college.

But the University's mission is not to train technicians and paraprofessionals, and the state and community colleges will not be educating lawyers and doctors and engineers and Ph.D.'s. Even

19. Within the public system there are income differences, too. Partly this is because the state and community colleges are more accessible physically than UMass-Amherst. Partly it is because they are easier to get into, and the all too typical concomitance of low-income background and poor schooling conspires to force low-income students disproportionately into the state and especially the community colleges. College Scholarship Service figures show the Amherst family income profile to be the highest among public institutions in the State. UMass/Amherst, indeed, has a higher income student body than Northeastern. The state colleges come next as a body, with Boston State at the low end by a considerable distance, but only slightly lower than UMass/Boston. Boston State is the only state college with a lower income profile than UMB. By contrast, the community colleges, with two exceptions, all show lower income profiles than UMass/Boston. All but three show lower income profiles than Boston State, and only one community college has a higher income profile than the next lowest state college.

as to those programs which overlap, however, it should be the University's responsibility to be in the forefront of developing new academic departures, new programs which can be a model for change in the other levels of the public system.

It is within this general context that we are convinced the University can appropriately serve 50,000 full-time and 15,000 to 20,000 part-time students in 1980.

GUARANTEED OPPORTUNITY IN THE PUBLIC SYSTEM

Before discussing admissions policies for the University, we believe it is important to speak to the accessibility of public higher education as a whole.

First, it is crucial that the public system not become economically and racially segregated. As it matures, a danger exists of differentiation within on invalid grounds. If admission to the University requires successful competition on standardized tests, it will tend to reward those who attend high schools which, among other things, teach test-passing skills. On the basis of present evidence, this means that disproportionate numbers of students from lower income and minority families will fail to gain admittance to the University, and will end up in the state and community colleges if they go anywhere. We oppose admissions requirements which on their face will produce such differentiation and discrimination.

Worse than de facto discrimination within the public system would be its failure to grant any access at all to some who desire a higher education opportunity. In a state which boasts some of the finest institutions of higher education in the country, there ironically is also a sad record of leaving people behind who both want and deserve the opportunity for higher education.

While it is not strictly within our mandate, we strongly recommend that the entire public system move toward a policy of "open admissions." The University cannot and should not be an "open admissions" institution. It must continue to choose its students on merit, though not according to the traditional definitions and tests of merit. Indeed, the University must move beyond open admissions in one sense; it must take affirmative steps to ensure a full diversity in its student body. But the public system as a whole should be open, guaranteeing a place at the appropriate level to every Massachusetts resident—high school graduate or equivalent— who desires higher education.

This is not a shocking idea. It has been the policy for years

in many midwestern states. If the Commonwealth moves, over the next ten years, to provide the approximately 216,000 needed places in the public sector, and if it divides these places wisely among the segments of public higher education, the policy of guaranteed opportunity will be a reality.

We would only add a note of urgency. There are now between 6,000 and 9,000 Massachusetts residents a year who are denied higher education for lack of places. 1980 is too far away for them. Additional places should be provided sooner, even if it means temporarily crowding classrooms and undergoing a difficult adjustment process.

ADMISSIONS GUIDELINES

The admissions policies of the University are the crux of this report. Robert O'Neil of Berkeley has said, "The importance of the issue derives from the fact that the admissions policies of an educational institution largely determine its mission and character—more than its structure or governance, the personality of its President, or even the interests and talents of its faculty." [20]

As Table IV indicates, the student body at the University of Massachusetts is moving up in economic status faster than income is rising in the population as a whole. At Amherst the portion of entering students coming from the lowest income third of families in the state dropped from 31.1 percent in 1966 to 23.4 percent in 1970. The pattern at Boston is similar, although the clientele is a lower income group. The portion of the over-all student body from families in the lowest income third dropped from 51.6 percent in 1968-69 to 38.8 percent in 1970-71. Both campuses have continued to serve the middle-income third of the population well.

20. Robert M. O'Neil, "Preferential Admissions: Equalizing the Access of Minority Groups to Higher Education," Yale Law Journal, Vol. 80, No. 4, March, 1971, p. 699.

TABLE IV[21]

TRENDS IN ECONOMIC BACKGROUND OF STUDENT BODY-AMHERST AND BOSTON CAMPUSES

	Amherst		Boston	
	Freshman Class-fall 1966	Freshman Class-fall 1970	Entire Student Body 1968-69	Entire Student Body 1970-71
Lowest one-third, family income in state	$ 7,300	$ 8,850	$ 8,100	$ 8,850
Percent of student body from lowest third	31.1%	23.4%	51.6%	38.8%
Top of middle third, family income in state	$11,420	$13,900	$12,650	$13,900
Percent of student body from middle third	36.3%	35.4%	31.4%	36.1%

On both campuses the percentage of students from lower-income families is steadily decreasing. This is the consequence of increased competition for places at the University as more young people want to go to college, private institutions get more expensive, and the University is increasingly perceived as a high status institution. Not surprisingly, the Boston campus, as the newer, commuter, and not yet so prestigious campus, still has a larger percentage of low-income students.

The University's record of serving low-income students remains good.[22] Nevertheless, to ensure that it does not drift as other state universities apparently have to a position of de facto discrimination against the poor and the near-poor, we believe it will have to begin devoting greater resources to the recruitment and admission of low-income students, particularly since private institutions are clearly serving the upper income half of the popu-

21. Family income figures for Massachusetts are derived by extrapolation from 1960 state and national census figures on family income, from annual national census figures on family income through 1970, and from annual state and national census figures on per capita income. See U. S. Bureau of the Census, U. S. Census of Population: 1960, Vol. I, Characteristics of the Population, Part I, United States Summary, and Part 23, Massachusetts (U. S. Govt. Printing Office, Washington, D.C., 1963); U. S. Bureau of the Census, Statistical Abstract of the United States: 1970, 91st edition (U. S. Govt. Printing Office, Washington, D. C., 1970); U. S. Office of Business Economics, U.S. Dept. of Commerce, Survey of Current Business, Vol. 51, #4, April, 1971. Income figures for the Amherst campus are derived from the annual American Council on Education Survey as summarized by the Office of Institutional Studies on the Campus. The 1968-69 income data for Boston are based on a December, 1968 poll of the student body, and the 1970-71 Boston data are from a student survey conducted at the request of this Committee in May, 1971. It would have been preferable to use state family income figures for families with college-age children, since that is the relevant population. Such figures exist for the nation, but not for individual states. They would presumably show a somewhat higher median income, since people with college-age children are, generally, close to their peak earning time, and the poor include disproportionate numbers of the elderly and newly formed families. If this is correct, the University is serving lower-income groups somewhat better than Table IV implies.

22. By comparison to public universities nationally, the University is doing well in serving low-income students. Last fall, only 12.5% of the entering classes of 18 public universities surveyed by the American Council of Education came from families with incomes in the lowest third of the population nationally (1970 figures)—incomes below $7,350.

lation disproportionately.

Although lower income students have historically graduated from high school and gone to college in far smaller numbers than the children of the affluent, the aspirations of lower-income young people are changing rapidly,[23] and in our judgment would change even more if opportunities were clearly available.

Maintaining even the present low-income proportions as the student bodies grow and competition increases will not be all that easy to accomplish. Substantial resources for financial aid and special recruiting, and for advising, counseling, and skill development when the students arrive, will be required.

We think the time is right to recognize the slippage shown in Table IV and take the affirmative steps that are necessary to maintain even the present income distribution, let alone accomplish any redistribution. It will mean relatively modest change to do this now. In five years it will be difficult to re-establish even the present income distribution, if nothing is done in the meantime.

We recommend that the University adopt guidelines to judge the success of its admissions policies in serving low and middle income groups. At a minimum we believe the present income distribution on the Amherst and Boston campuses can and should be maintained. Although we cannot prove it, we also believe the Amherst campus and any new campuses can attain the kind of distribution set forth in Table V.

That distribution would be a straight economic representation of the lowest income third of the population—a third of the entering students from the lowest family income third of the population, which in Massachusetts in 1970 included all families with incomes below $8,850. Boston is already serving both the lowest and middle income thirds of the population well, and we think it will be doing well to maintain its present level of performance.

As Table V shows, if Amherst's student body were fully representative, the campus would have enrolled 358 additional freshmen from the lowest income third of the population last fall. Throughout the entire University of about 11,000 freshmen in 1980, the suggested distribution would mean 696 more freshmen from the lowest income third than would be present under a projection of the present income distribution, as also shown in Table V. We do not think this is a startling difference.

23. By 1965, for example, over half of the high school seniors in the lowest quartile of family income nation-wide were planning to attend college. Corazzini and Associates, Higher Education in the Boston Metropolitan Area, supra, p. 22. In 1969 60 percent of the lowest family income quartile Boston seniors whom Corazzini surveyed had college aspirations. Id., p. 59.

TABLE V

EFFECTS OF COMMITTEE RECOMMENDATIONS
ON ECONOMIC COMPOSITION OF
FRESHMAN CLASS

	AMHERST			BOSTON		
	Total FTE Freshmen	From Lowest Income Third	From Middle Income Third	Total FTE Freshmen	From Lowest Income Third	From Middle Income Third
1970-present income distribution	3,600	842 (23.4%)	1,274 (35.4%)	1,100	427 (38.8%)	397 (36.1%)
1970-Committee guideline (Hypothetical)	3,600	1,200 (33-1/3%)				
1980-present distribution projected	5,000	1,170 (23.4%)	1,770 (35.4%)	4,000	1,552 (38.8%)	1,444 (36.1%)
1980-Committee guideline projected	5,000	1,667 (33-1/3%)				

WORCESTER & ADDITIONAL CAMPUSES

	Total FTE Freshmen	From Lowest Income Third	From Middle Income Third
1970-present income distribution	0	0	0
1970-Committee guideline (Hypothetical)	0	0	0
1980-present distribution projected	2,000	468 (23.4%)	708 (35.4%)
1980-Committee guideline projected	2,000	667 (33-1/3%)	

These suggestions are not an admissions procedure in themselves. They are self-evaluative guidelines by which the University can measure the effectiveness of its recruitment, admissions, and financial aid policies in attracting low-income students, and in serving middle income families as well.

Cutting across the question of the economic background of the student body is the matter of the University's obligation to students from racial or ethnic groups which have been discrimi-

nated against historically or have for other reasons been grossly underrepresented in the college population. In a state as multi-ethnic as Massachusetts it would be an error to conclude that this necessarily means only blacks, Puerto Ricans, and American Indians.

There are Portuguese in New Bedford and Fall River, Greeks in Boston and Lowell, Chinese in Boston and Polish in various parts of the State. There are Cape Verdeans, French Canadians, and a number of groups from the Caribbean and Central and South America. A full study of racial and ethnic discrimination and underrepresentation is needed to determine which groups need special attention.

In recent years the University has taken strong, impressive steps to recruit, admit, and financially assist black students. The CCEBS (Committee for the Collegiate Education of Black Students) program on the Amherst campus brought the percentage of black undergraduates there from 1.3 in 1968 to 4.0 in 1970, including 6.1 percent of the freshman class last fall. The "Special Admissions" program on the Boston campus (which also does special recruiting for low-income white students) brought the share of black undergraduates at that location up to 6.7 percent by 1970.

These fine efforts need to be improved upon and extended to other minority groups. Greater effort is needed in the black community because the University's two undergraduate campuses are located close to the two largest black communities in the State, in Boston and Springfield. Moreover, neither the state nor the community colleges are helping sufficiently on this matter, [24] thereby increasing the burdens and responsibilities bearing consideration and attention by the University.

But if more needs to be done to recruit and support black students, there are other areas of special need where much less has been done. In a State where the poor are about ninety percent white, thousands of white high school graduates every year need to be reached, recruited, and given financial assistance if the University is to be a realistic possibility for them.

Some of these white students have been left behind mainly because of their economic status, while study may show that others come from ethnic backgrounds where there is a special history of discrimination. The university needs to develop criteria to serve

24. Boston State, for example, had a four percent black enrollment last fall. There is no community college located within the city limits of Boston at present, which is a revealing fact, and the largest black percentage in the community college system was 2.6, or 59 students, at Springfield Tech. Massachusetts Bay, which is closest to Boston, had .5 percent, or 7 students. Chronicle of Higher Education, Vol. V., No. 25, March 29, 1971, p. 4.

the latter as well.[25]

Cutting across both economic and racial-ethnic lines is the matter of older students. This is fairly new territory, for the University has relatively few part-time undergraduates.[26] The issue is, which older students will the University seek? The experience of other institutions is that the older student clientele tends to be fairly affluent, and this could conflict with the admissions guidelines we have outlined. In general, therefore, the University would be well advised to design or adopt programs which would tend to have more appeal to lower-income older people, and then recruit students specifically for those programs. At the same time, however, the University's over-all policy must be one of equal access regardless of age. But the mix of older students actually attracted will be affected by the programs offered, a matter we discuss below in Chapter III.

As in other areas, the older student clientele should reflect that the institution is public and a university. There must, for example, be appropriate admissions standards for the students who come, although these will have to be adapted to the situation of an older clientele. High school records will be old and not very meaningful, and test scores will be even less relevant than they are for younger students. Work and other experience will correspondingly be more to the point. And the education which the University offers older students should be university-level work—older students seeking strictly vocational training should go elsewhere.

We do not know what the latent demand for college work is among older people, or what their program interests would be. The University should therefore move carefully and gradually as it seeks to serve older students, opening up more places to them as its early initiatives meet with good response.

The admissions effort might begin as follows: Perhaps in late 1972 the University would announce that a given percentage of its full-time equivalent freshman places for the fall of 1973 will be reserved for students age twenty-five or older (with places to revert to the general admissions pool at a given date if they are not taken up). At the same time it reserves for prospective older students an equivalent amount of room in courses (again with places to revert if they are not used).

25. Robert O'Neil has delineated four criteria for the choice of groups which might deserve special attention: those "who not only have been under-represented, but who have disproportionately been (a) victims of overt racial discrimination; (b) socio-economically disadvantaged; (c) unfairly appraised by standardized tests; and who are (d) graduates of over-crowded, rundown, and badly staffed high schools." O'Neil, "Preferential Admissions: Equalizing the Access of Minority Groups to Higher Education," supra, p. 750.

26. The Boston campus, however, has a slightly disproportionate number of older full-time students. Thirteen percent of the respondents to our survey were 25 or older. Only one percent, however, were 30 or older.

As the program gets under way, the University begins to offer some courses off-campus, in local high schools or the auditoriums of public buildings. As time passes, the "Open University" program which we propose in Chapter III comes into operation, adding to the campus-based and the circuit-riding courses a series of learning options using packaged materials, television, and tutoring in satellite learning centers. By then, older students will be learning partly on campus and partly off, partly through human contact and partly through new technology; and in the end, so will all students.

A final issue regarding the accessibility of the University to older students is that of tuition. Traditionally, less than full-time students (a 75% course load is usually regarded as the point of demarcation) pay a disproportionate tuition. In the fledgling older student program at Amherst, the charge is $25 a credit hour at present, or an equivalent of $750 a year for a full course load. The charge is even higher for courses which are being offered at off-campus locations. While part-time students should perhaps pay some premium for the extra paper work in handling them, in a public university with an annual tuition of $200 for full-time students $25 a credit hour is excessive, at least for those students whose courses are not paid for by their employer.

A fair tuition policy might differentiate between students in degree-oriented programs and those in non-degree-oriented programs. The latter are in general the clientele of short course continuing education programs, and are likely to have their fees paid for by their employer. The former, we have argued, should tend to be a lower income clientele. Thus the one group can appropriately be charged at full cost or close to it, while the other should be charged a tuition that is fair in relation to the University's tuition for full-time students.

There are two other matters concerning admissions goals: Women and transfer students. The Amherst campus is not doing as well in admitting women as four-year institutions around the country. Nationally, women constitute 46 percent of undergraduate student bodies and 36 percent of the graduate student enrollment.[27] At UMA, women constitute 43.3 percent of the undergraduates and 32.4 percent of the graduate students. At UMB, 46.6 percent of the student body are women, slightly exceeding the national average. In numbers the disparity among undergraduates at the Amherst campus is over 2,000—there were 8,663 men last fall and 6,599 women. We recommend that the University, particularly at Amherst, move actively to admit more women in all of its programs.

27. American Council on Education, A Fact Book on Higher Education (1971), pp. 71.28, 71.34.

The question of what policy to follow regarding transfer students, especially from the public community colleges, is already becoming more difficult. The University's present policy is one of "accepting any qualified community college student who has completed the two-year transfer program with a satisfactory academic performance and who is recommended by the appropriate officials." The hedges in the statement are obvious. The community colleges are already graduating some 6,000 students a year, of whom more than half want to go on with their education. In reality the University cannot accommodate all of the qualified students who want to continue.[28]

By 1980 the public community colleges may graduate 10,000 to 15,000 persons a year who want to continue with their education. It is imperative that the public higher education system develop the means for assuring that all who want to continue can do so. In this regard the recently announced plan of Boston State to work with the community colleges in developing a new senior-college facility is a welcome and very promising initiative.

We believe that the University should also plan to take proportionately more transfer students than it does now, and that it could do this without undermining its efforts to build a strong, cohesive undergraduate community. This will be possible if the University, like the State University of New York, adopts a policy that a minimum of forty percent of its undergraduate student body will be at the freshman and sophomore level. Of course, the recommendations about low-income, minority, and older students would be fully applicable to the process of selection among transfer applicants. But it should also be stressed that if the problem is to be handled satisfactorily over-all, the state colleges will have to bear a far greater share of the responsibility than they are assuming at the present time.

FINANCIAL AID

The inescapable and indispensable key to realization of the admissions goals for low-income students is an adequate program of financial aid. We have seen ample evidence of the University's good will and continued commitment as a public institution to

28. Under the quoted policy, the Amherst campus last fall took 487 transfer students from public two-year colleges. It took another 120 from private two-year colleges, and 380 from other institutions, for a total of 987 transfers. Thus just slightly over half of the transfers were from public two-year colleges. This fall it is taking about 1,000 transfers again, but this time more like 90 percent will be from junior colleges, public and private. Boston is under similar pressure. In the fall of 1970, it took 275 transfers, including 150 from junior colleges, public and private. This fall it is taking 600 transfers, including 200 to 300 from junior colleges.

serving low-income students. But it will not be able to fullfill that commitment if it lacks the monetary resources to make sufficient financial aid available.

For the fiscal year which ended June 30, 1971, the University spent something over $3 million on financial aid, from all sources.[29] Of this amount, the legislature provided about $1.3 million. It is difficult to estimate how much more the University should have to provide adequately for its present student body, and even more difficult to say precisely how many students do not attend at all because of the unavailability of financial aid. However, the Board of Higher Education has recently cited an estimated scholarship deficit of more than $50,000,000 over-all for Massachusetts residents at the present time, and the University's own financial aid officials estimate their current unmet need for financial aid resources at $7.5 million. In these circumstances, the President and Trustees have decided to ask the Governor and the legislature for an additional $4.5 million in financial aid for fiscal 1973, a first step toward adequacy which we strongly endorse. We estimate that State support for financial aid at the University will have to total something like $20 million by 1980 in order to accomplish our recommendations.[30]

We wish to concentrate here not on the amount (we analyze the budgetary implications in Chapter V) but on the structure of the present financial aid budget, which we believe is constricting in a number of ways. The legislature provides aid funds in two accounts, one "for certain scholarships," which is a general scholarship category and one for "disadvantaged students." The latter is the source of state support for CCEBS at Amherst and special admissions at Boston, and is at the present time, therefore, a euphemism for assistance to black students, except for a few dozen students each year at UMB. The "disadvantaged students" category includes not only student aid, but also program support for the recruiting, the skill development courses, and the supportive services which accompany it.

As we have said, we are convinced that there are many able low-income white students who will not be reached without the special attention now directed almost exclusively to black students.

29. This includes state funds, federal funds from NDEA, work-study, and Educational Opportunity Grants, and the University's small Scholarship endowment income. It does not include loans which are not administered by the University.

30. We have not undertaken to analyze the appropriate mix of grants, loans, and work-study funds for the future. This is a matter which is heavily dependent upon national policies adopted by Congress and we are not equipped to sort it out. One area where the University can affect the mix is by hiring student employees for as many on-campus jobs as possible. The relevance of this was shown by our survey of the Boston student body. Outside work is the major way the Boston student body is putting itself through school. Eighty-one percent of our respondents work continuously or occasionally during the school year; 68 percent work more than 10 hours a week. Only 27 percent listed parental or family aid as their major source of financial support while going to school; 76 percent said they receive no financial aid from the University.

We suggest that the University work with the legislature to reorganize the scholarship category into one line, emphasizing that this line will provide funds not only to continue and expand support for low-income black students, but also for an even greater number of low-income white students.

Moreover, we would separate out the costs of recruiting, skill development, and supportive services into separate budgetary lines. Each is an activity which should reach well beyond low-income students. For example, it is a mistake to think that only low-income students are likely to need special instruction in basic reading, writing, communication, and mathematics skills. Skill development should be available for all who need it, and its administration and budget should be so organized. The same applies to advising and counseling. Analyzing the needs of the poor and black for these services reveals the poverty of the present effort for all students. The remedy, again, is to reorganize the budgetary approach so that all advising and counseling is accounted for in one place.

If the budgetary approach to these crucial activities is reorganized as we suggest (a beginning in this direction has been made in the 1973 budget), we think the University will fare better in obtaining the necessary funds. For it will be clear to all concerned that the clientele for financial aid and supportive services is more nearly a racial and ethnic cross-section of the State's population than is commonly supposed at the moment.

Closely related to the question of financial aid is that of tuition. It is clear that even with the present low tuition in the public system, thousands of young people in the Commonwealth each year do not go on to college because they cannot afford to do so.[31] If the University and the rest of the public system can move to serve these low-income people more fully, that will justify asking the taxpayers to continue shouldering the major burden of financing public higher education. In any event, we believe that if immediate efforts to attract more low-income students are to succeed, financial barriers to access should be fully removed before any increase in tuition is considered. Unless accompanied by a disproportionate increase in financial aid, a tuition increase will simply make the remaining barriers to attendance, actual and perceived, more formidable.

Related to the question of tuition is the recent advocacy by some of a combination of new student loans and significantly

31. See, e.g., Corazzini and Associates, Higher Education in the Boston Metropolitan Area, supra, pp. 12, 18. Over seven percent of the graduating seniors surveyed cited financial barriers as their reason for not going to college. Since there are about 60,000 graduating seniors in the Boston metropolitan area each year, this would mean about 4,000 graduates annually for whom finances are a serious obstacle. The statewide figure would naturally be larger.

higher tuition to solve the financial plight of universities. It is argued that higher education will increase the student's lifetime earnings, and that he can and should pay the full cost of that education over time as an added tax on his earnings. The proposals make the amount of repayment contingent on the level of earnings, so that if the student earns less he will pay less.

As an innovative loan proposal— that is, wholly apart from any accompanying tuition increase— we think the idea makes theoretical sense and deserves practical trial and experimentation. All new financing options to make higher education more accessible should be welcomed.

But as a plan to increase tuition and add a surtax on later earnings, the proposal is more dubious. Whatever its validity as applied to private institutions, in the public sector it calls into question fundamental assumptions about who should pay for higher education — the extent to which college is to be viewed as a right or as a privilege.

This issue is very real in a public institution or system which is truly devoted to the concept of equal opportunity for all— the concept we believe should define the future University of Massachusetts. For as applied to the very poor, the pay-as-you-earn loan concept, in the absence of additional funds for fellowship grants, will almost certainly constitute a major new barrier to access. If there is concern that too much state subsidy is going to more affluent students now, perhaps the answer is not to make everyone pay the full cost, but rather to change the composition of the student body to make it fully representative of low-income groups. As with straight increases in tuition, we urge the greatest caution and the most careful consideration before any loan-tuition package is seriously proposed.

RECRUITMENT AND ADMISSIONS PROCEDURES

If more low-income students are to be recruited and admitted, new recruitment and admissions procedures must also be developed.

It is essential, to start, that the University deepen its ties with the high schools of the State, especially those which have been under-represented at the University. Both Amherst and Boston have good high school visitation programs, and good relationships with guidance counselors. Neither, however, has the resources to do very much talking directly to students; the high school visits are aimed more at talking with counselors. Neither campus

has the resources to make a bigger effort to identify promising students who may not score well by conventional criteria. Neither has the resources to make a bigger effort to identify promising students who think they are unable to afford college, and who simply are not planning on it.

The students who most need to be reached are those who know least about what is available and who, in many cases, may have the most mistrust of society's institutions. Ways have to be found to work with such students when they are juniors and sophomores in high school, so they will be prepared for college later.

These are not new or startling ideas; they have been the moving force behind such programs as Upward Bound and A Better Chance. The main thing that keeps them from being implemented is lack of funds. If the University is to do a significantly better job at attracting low-income students, it will have to devote an increased measure of financial resources to the effort.

Somewhat similar efforts, although less intensive, must be made with regard to recruitment of older students. Staff should visit corporations, government agencies, community organizations, and other places of employment or gathering where potential older students are to be found, to explain and publicize the programs which the University has available. Other means of publicity should be utilized as well. Recruiting of older students will overlap with program development. For example, negotiations with specific organizations, like poverty agencies, corporations, hospitals or museums, might produce both students and programs peculiarly adapted to those students.

The idea of recruiting for specific programs applies to students of all ages. Recruitment of a student to the University is like a contract: the University offers him something he wants and needs in exchange for his agreeing to come. The University should therefore take steps to involve representatives of specific academic programs in the recruitment process and should seriously consider decentralizing the admissions process to specific schools and programs, so that particular units of the University may recruit and admit a portion of their students directly. This is already being done to a limited extent at the Amherst campus, in the School of Education, the Music and Art Departments, and the School of Nursing. It should be expanded to other areas.

The next step after recruitment is the admissions process itself. If the recruitment process produces potential students who are unlikely to qualify by the conventional reference to testing and high school grades, they will have to be evaluated in other ways,

whether through interview, recommendation, record of community service and extra-curricular activities, or other individualized judgment as to their unique talents and capabilities. This is already done in the CCEBS and special admissions programs. What we are recommending, therefore, is that this approach be broadened to the extent necessary for effective pursuit of the admissions guidelines we have outlined above. A significant minority of the University's students should be admitted according to an individualized determination.

The majority of students should still be admitted according to a formula which is designed to yield an able student body. We believe a new formula based on high school grades or rank in class would be more successful in reaching a fair cross-section of students from weak high schools than the present approach which relies partially on test scores. Such a formula will ensure representation from rural and inner-city schools in the University at the same time that it keeps the door open to able students from other areas.[32]

Under these admissions procedures, the University would use special recruiting efforts to seek all of the students of exceptional talent that it can find, and also what B. Alden Thresher, the long-time Director of Admissions at MIT, has termed "the offbeat people so likely to be automatically refused admission under the conventional and received values of our society."[33] It would also use special recruiting efforts to seek "disadvantaged" students who have talent but do not qualify by conventional measures. It is critically important that the University develop what Thresher has called "a humane floor" for this category of students, to prevent accepting people only to force them out later.[34] Reliance on a formula based on high school grades or rank in class will help with the middle range of students, among whom it is hardest to choose.

A related issue in the admissions process is that of deferred admissions. Many colleges and universities permit newly admitted students to wait a year, sometimes more, before entering. The Amherst campus does this for a few students each year upon re-

32. We do not see the necessity of getting into the controversy over the role of testing, except to point out that the College Entrance Examination Board's own Commission on Tests found that standardized tests "almost perfectly reflect the bias against 'disadvantaged' groups that results in their relatively depressed scholastic attainment." The Commission did not recommend abolition of tests, but found need for "considerable modification and improvement if they are to support equitable and efficient access to America's emerging system of mass post-secondary education." Report of the Commission on Tests, I. Righting the Balance (College Entrance Examination Board, New York, 1970), pp. 52, 54.

33. B. Alden Thresher, "Uses and Abuses of Scholastic Aptitude and Achievement Tests," in Barriers to Higher Education (College Entrance Examination Board, New York, 1971), p. 38.

34. Ibid.

quest, but we think both campuses could and should make this an affirmative policy.

We recommend two things: one, that all students receive with their notification of admission a statement that if they do not wish to start immediately, their place will be held for a year or perhaps two, to enable them to spend time finding themselves in other ways, taking a breather from organized instruction for a while; and two, that a percentage of places be set aside and publicized as being for people who have been out a year or two. We think these rather easily accomplished changes in policy could not only create an opportunity for broadening experiences, but also help develop a sense of academic and vocational direction.

SKILL DEVELOPMENT AND OTHER SUPPORTIVE SERVICES

The final step in the process is what happens to the students once they come to the University. None of what we recommend is going to end constructively if students, so arduously recruited, drop out after a semester or a year because nothing engages them or because they lack the skills needed to cope. Fulfilling the obligation to low-income students and, indeed, to all students, means adequate advising, counseling, skill development, and all other supportive services, and the expenditure of adequate resources on these activities. Otherwise, a university can never hope to adapt itself to the needs of students who are not prepared to take it just as it is. And it is essential to understand that the number of students who are not fully prepared is far larger than just the so-called "disadvantaged."[35]

The current CCEBS and special admissions programs do have skill development courses attached to them, but these efforts will have to be significantly increased, both for the increased number of students who would not have been admitted under traditional criteria and for many who did travel the regular route.

35. At the City University of New York, it was found that 20 to 25 percent of those who turned out to need skill development help were people who would have been admitted under the old criteria of admission.

ACCESSIBILITY WITHIN THE UNIVERSITY— CAMPUS SIZE AND LOCATION

Amherst. We are distressed about the present size of the Amherst campus, both in terms of disruption of its internal sense of community and of its impact on the areas surrounding it.

At a size of over 20,000, which the campus reached last fall, it has already become hard to administer and even harder for students as individuals to fathom.

At the same time, the campus is creating increasing problems for the town and the surrounding area. The proliferation of off-campus apartments has created an unplanned suburban sprawl in some areas. The proliferation of cars has created a serious traffic problem. Strains have been placed on water and sewer resources. The spread of drugs has created a burden on law enforcement.

We believe the Amherst situation, from all points of view, is so serious that if there were no other facts to consider, further growth should stop immediately.

There are, however, some important additional considerations.

The University does not now have sufficient growth capacity elsewhere to absorb the effects of an immediate freeze at Amherst. The campus itself has new facilities and programs in the pipeline which cannot be turned off without dislocation. Most important are the more intangible considerations of quality, morale, and status. Amherst has built its excellence through growth. It has achieved national recognition as a major university center. Its continued growth would enable it to change more easily in response to newly emerging needs. Stopping growth is hard on the morale and status of any institution, especially in a country where growth is so widely perceived as synonymous with progress. The prestige of Amherst is such that if it stops growing, competition for places in its student body may be significantly greater for some time than for Boston or newly developing campuses.

Some of these concerns can be lessened in their impact if growth is first slowed for a time and then stopped altogether after a period of adjustment. Other state universities have lived through similar adjustments as their original campuses reached a point of ceiling capacity, and consolidated their excellence, and have ultimately been better for stopping.

The growth has to stop some time, as the Trustees have already recognized in their discussions over the past year. At the absolute top, we think the stopping point should be 25,000 students; indeed, we would prefer that the ultimate ceiling be noticeably less. In order to maximize the possibility of innovation during the period of decelerating growth, we urge the Presi-

dent and Trustees to make it an article of budgetary policy that new money which comes to Amherst by virtue of growth from now on be applied predominantly to finance innovation.

Boston. We are concerned more about the physical accessibility of the Boston campus than we are about its size.

As to size, we think Boston will have to exceed the 15,000 student capacity now envisioned for it in 1980 if it is to accommodate a substantial number of older, part-time students as we think it should. There is a dearth of public institutions of higher education in Boston. Only two of the eleven state colleges, Boston State and Massachusetts College of Art, are located in Boston. No community college is in Boston, although two new ones, one in Charlestown and a small one in Roxbury, will open their doors within the next two years.

The presence of Boston State, with its 5,500 full-time and 3,000 part-time students (plus some thousands more who take courses but are not degree candidates), especially under its new leadership, is a resource of great present and future value. Apart from this, however, both the state colleges and the regional community colleges, with locations in places like Salem, Framingham, Watertown, Beverly, and Bedford, are far more accessible to young people from suburbia, especially from the outer suburbs, than they are to students from Boston or directly adjacent communities. This pattern of location of other public institutions places added responsibility on the University of Massachusetts at Boston.

The master plan at UMB calls for 15,000 mostly full-time students — 12,000 undergraduate and 3,000 graduate students. Based on the demand projections discussed earlier, we would add to this perhaps 10,000 part-time, mostly older, students. If based on an adequate study of student interest, and developed gradually, we think this degree of service to older students will be consistent with the University's proper role.

We are troubled about locating the Boston campus solely (or almost solely, if the 100 Arlington Street building is retained) at Columbia Point. A single campus for a public, urban commuter institution, particularly one which is not centrally located, may well not be sufficiently accessible to students or to other people who want to avail themselves of the University's facilities or activities.

We are aware of the difficulties that were involved in selecting the Columbia Point site. We know that $130 million worth of buildings are under construction. And we appreciate the difficulties which will attend any decision to change the $355 million campus planned for Columbia Point.

Nonetheless, locating the entire Boston campus at Columbia Point may preclude thousands of able Boston young people from experiencing a university education, keep many older people from coming back for later-life education, and keep the University from playing the full and active role it should in Boston area communities.

We recommend, in order to promote the physical accessibility of learning and the possibility of community service, that the plans for the Columbia Point campus be modified to make that location the nucleus of an urban university system dispersed throughout the Boston area.

We also recommend a full review of the University's construction program for Boston to determine the appropriate amount of building for Columbia Point and the desirability of partial dispersal of facilities. The goals of this study should be the most educationally effective institution and the most felicitous use of the Columbia Point site itself in terms of impact on the surrounding community.

This study and suggested redesign should begin immediately so that an appropriate mix of building at Columbia Point and program development elsewhere can occur with little disruption.

A key issue in the study should be the University's relationship with the residents of Columbia Point, Dorchester, Savin Hill, and South Boston. Consultation and close cooperation with area residents are of prime importance in this study.

We suggest an ultimate picture something like the following: The main campus— the nerve center of all activity— would be at Columbia Point. The main library and the central computer and communications facilities would be at Columbia Point. Most, if not all, of the University's Boston programs would be based at Columbia Point, but many would be available in other places and ways as well.

First, some courses would be offered in facilities leased or borrowed from elementary and secondary schools, other colleges, local governments, churches, and businesses, as well as at Columbia Point.

Second, some courses would be offered off-campus using new technology and methods of learning analogous to the techniques employed in the British Open University. Thus, some courses might involve a mix of correspondence materials, television or other media, and seminar or tutorial groups at decentralized locations. This approach would require small satellite study centers throughout the metropolitan area where the essential human contact portion of the learning process would occur.

Third, the University should consider establishing a limited

number of small, experimental two-year units in places especially accessible to low-income students. These would be explicitly transitional units, established to overcome obstacles of accessibility to the University which some low-income people feel exist in a physically and psychologically distant University. These students would be expected to move into the University's regular program following attendance in the transitional college.

We are aware that this kind of activity is usually associated with community colleges in a public system. But, except in Roxbury and Charlestown, the community colleges are not adequately serving Boston or immediately adjacent communities. Therefore, unless the community colleges change their policies and plans, we urge the University to move in this direction. The Model Cities College should be looked at in this connection as a possible vehicle for greater University involvement.

Fourth, the University should retain the 100 Arlington Street facility. A centrally located unit is essential as an alternative location of classes for part-time students.

Fifth, dispersal might also be achieved by arrangements with private institutions of higher education, museums, conservatories, poverty agencies, businesses and government agencies.

The University might avoid duplicating costly specialized programs by contracting with private colleges and universities for students to take some of their work at these institutions. This contracting might also be a welcome source of income to other institutions. Possible state constitutional barriers to such arrangements will have to be examined before this program can proceed.

Another exciting possibility is relationships with institutions which now offer no credentials. For example, local poverty agencies employ many "para-professionals," who are adept in social service but do not have formal credentials. These employees are often eager to upgrade their informally acquired abilities and knowledge by adding to these the conceptual framework which formal training provides, and to acquire a bachelor's or advanced degree to enhance their careers. The University could cooperate with such agencies to develop programs especially designed for such employees. This would be an especially appropriate form of partial dispersal for the projected College III of Public and Community Service. Similar arrangements could be made with government agencies and business corporations.

A related issue regarding the accessibility of UMB concerns mass transportation to the Columbia Point campus. The ultimate transit burden will be eased somewhat if partial dispersal occurs. But even with dispersal there will still be many thousands of students coming to Columbia Point every day. The site has

limited access for cars, and the present mass transit facilities are inconvenient to many potential students. Especially serious is the question whether bus service will suffice to move students between the Columbia MBTA station and the campus. There is reason to believe that no surface transit solution will ever suffice to move the number of students who will have to be moved in the particular traffic circumstances of the location. Even if bus service would work, resources have not yet been made available to build terminal facilities and to acquire vehicles.

Unless adequate resources are provided, the campus will open up with a serious people-moving problem. The University is well aware of this, but has been unable to get a sympathetic response from any potential source of funds. Therefore, we as a Committee join the University in emphasizing the gravity of the problem. The MBTA is at present studying the problem under a grant from the U.S. Department of Transportation, and we hope that agency will proceed to develop a workable solution to the matter as part of its service patterns. Inconvenience not only to students, but also to thousands of commuters is certain to result if a solution is not found.

Another related issue is the question of housing for students and faculty at Columbia Point. The University does not currently intend to build any housing on campus. We have heard conflicting testimony as to whether this policy should be changed. Some say that housing for some faculty and perhaps ten to twenty percent of the student body will help create a sense of community that is generally lacking at a commuter institution, that it will enable the Boston campus to attract a somewhat more worldly student body, that it will help ease the pressure on the housing supply of surrounding neighborhoods, and that it will assist UMB in recruiting faculty. Others argue that universities are getting out of the housing business as much as they can because of its cost and the declining interest of students in living on campus, that limited housing will create an on-campus student elite, and that there is no assurance that those who would live on campus are the same ones who would live in Dorchester.[36]

The opponents of on-campus housing have on their side the limited amount of land available at Columbia Point. Some land would become available if the University were ever to purchase Boston College High School, or if, for example, the fifth and sixth college buildings were not built. Still other land could be acquired between the present site and the waterfront if satisfactory arrangements regarding the sewage disposal plant now located

36. We consider the related but separable issue of the University's impact on the housing supply in Dorchester in Chapter IV.

there can be made. Still, the over-all amount of potentially available land is such that the only feasible housing might be high-rise, which we think an unwise way to proceed. Students around the country dislike high-rise housing now, and it would probably not be attractive to faculty either.

Nonetheless, we believe the housing question should at least be re-examined. Forty-one percent of the students who responded to a survey we conducted on the Boston campus this Spring said they thought housing should be built on campus at Columbia Point. Another 29 percent said that student housing should be built near the campus (although nearly two-thirds of this latter group said off-campus student housing should be built only in conjunction with programs to build housing for area residents). Thus, seven out of every ten UMB students believe some student housing should be built at or near the Columbia Point campus. When the question was for what portion of the student body should housing be built, 15 percent of those responding said none, 4 percent said 10 percent, 12 percent said 20 percent, 26 percent said 35 percent, and 28 percent said 50 percent or more.

We think these survey findings require reconsideration of the matter. At the same time no one should underestimate the enormous difficulties facing the University if it decides to try to move ahead with any kind of housing. One need only look at the on-going problems associated with the dormitories at the Amherst campus to see what is involved. But if there is a way in which low-rise, apartment-style housing for a limited number of faculty and students can be built, we think it should be done.

If any housing is built, careful guidelines will have to be developed for its occupancy: assurance of places for low-income students who need a subsidy to live in it; an appropriate number of units for married students; a policy on whether students from all under-graduate classes can live in it, and if so, how many from each; and whether students who could commute need any special justification, such as problems at home, in order to be allowed to live in it.

Worcester. At present, Worcester is limited to being a Medical School which will ultimately have 400 students, but the physical site could easily accommodate a campus center of perhaps 5,000 students, graduate and undergraduate. Feasibility studies for the physical and academic aspects of such an approach are under way, and we endorse the idea.

A major issue regarding the facilities at Worcester is that of the projected 403 bed teaching hospital. Some have argued that a teaching hospital is not necessary in an area that has a number

of existing hospitals with which a medical school might affiliate and establish teaching programs. Whatever the merits of that argument elsewhere, we disagree with it here. The Medical School's future has already been somewhat complicated by the struggle which occurred over its location. Some people in the medical profession felt that a Worcester location was inappropriate, arguing that either an Amherst location with its fully developed university surroundings or a Boston location with its multitude of related health facilities and schools was essential to ensure academic quality. For the Medical School to be deprived of its teaching hospital would revive these objections, since many of the same medical experts would object that a new medical school cannot fulfill its mission without a hospital. Without judging the merits of their position, we would simply say that we believe the University cannot afford to run the risk of not proceeding with the hospital.

Indeed, we would urge greater despatch in getting the hospital built. As things stand, the recruitment of many faculty, particularly clinical faculty, is difficult until the hospital is there. The establishment of many outreach programs which require a hospital for their base cannot occur until the building is there. Movement toward the new curriculum and public service activities which we recommend in the following chapters for Worcester as a health professions center is closely related to faster progress on the hospital. The sooner the hospital is completed the better, for the Medical School will not be able to play a full role in the life of the Commonwealth until the hospital is finished.

Other Campuses. If the University is to be accessible to the people of the Commonwealth, no matter where they live, we believe it will need to find new ways to reach those who live in the northeastern part of the State and the southeastern part of the State. Lowell Technological Institute and Southeastern Massachusetts University are, of course, already located in these areas, and we do not think additional University campus centers which compete or overlap with these institutions are warranted. The issue for the future, therefore, is whether merger with one or both of these institutions is wise. We recommend that the issue be mutually explored. We believe it should be possible to devise an approach which strengthens all of the institutions concerned.

The Learning Process - What, When, and Where?

SUMMARY OF MAJOR RECOMMENDATIONS

- The University should seek to intensify its undergraduate focus, offering a diversity of programs, places and times to learn suitable to a diverse student body and a complex society.
- Amherst should be the primary place for advanced training; Boston should be the more professionally and urban oriented center; and Worcester should be a health professions and health sciences campus.
- The freshman year should be re-examined, to bring to it better advising and counseling, more resources, and new curricula approaches.
- A greater diversity of carefully designed options for the rest of the undergraduate years should be created, including more options for independent study, broadened majors, new problem-oriented approaches to learning, a College of Public and Community Service at Boston, and a broadened conception of the possible missions of the remaining colleges at Boston.
- Diversity in the place of learning should be pursued, including more field work in courses, partial dispersal of the Boston campus, and an "open university" unit for Massachusetts.
- Diversity in the time of learning should be pursued, including deferred admission, permission for "stopping off," and allowing students to finish degree work faster.
- The University should examine its graduate teaching and research activities to see how they can contribute more effectively to an undergraduate focus.
- The University should place increased emphasis on professional education, both graduate and undergraduate, and should endeavor in its professional programs to inculcate both practical competence and the perspective and values traditionally associated with the liberal arts.
- Advising and counseling should be greatly expanded and improved.
- The faculty and departmental reward systems should encourage teaching and public service activities as much as they do research and publication, and an appropriate teaching evalua-

tion system should be considered to facilitate this.

- New staffing patterns should be developed, including a teaching-oriented university professoriate, more adjunct faculty, more women and minority faculty, and more adequate support staff for faculty.
- Library and computer facilities should receive more adequate financial support, for they are integral to the teaching and research processes of the University.
- Dormitory living at Amherst should be the focus of new community-building efforts, and efforts to facilitate outside-of-class communal life at Boston should be intensified.

If the University is four times the size that it was in 1960, it is also very different academically. It is no longer overshadowed by the Commonwealth's glittering array of private colleges and universities.

On the Amherst campus, 35 new undergraduate majors were instituted over the last half of the sixties. The number of graduate programs has approximately doubled in recent years, to the point where there are now 46 doctoral and 65 masters degree programs. Many of these programs have achieved national recognition, and applications to enter them are being received from all over the world. Books by UMA scholars have won national awards, and many faculty members have been elected to national committees in their fields. The University press has won a series of design awards for its books.

The Boston campus, of course, did not exist at all in 1960, and it has built a remarkably strong undergraduate liberal arts program in a very short time.

It is precisely the rapid and impressive academic development of the past decade that creates both the obligation and the opportunity to pause and evaluate. In discussing academic matters we are conscious that decisions on issues of curriculum and program are primarily the responsibility of the University's faculty and administration (although we believe students should have a measure of responsibility for such decisions). Our suggestions regarding academic directions should be understood in this context.

We see continuing differences in the roles and responsibilities of the Amherst and Boston Campuses. But in stressing the differences we must be honest about some serious dilemmas which will bedevil the University throughout the decade:

--How can the University create different roles for the two campuses and yet assure the faculty and students the quality they deserve?

--How can the University maintain the morale and emerging national reputation of Amherst while slowing growth and to to some extent re-orienting campus priorities?

--How can the University build a campus at Boston that is appropriately "urban" in its program and clientele without being perceived as inferior merely because it is different?

At Amherst the challenge is to strengthen the worthwhile graduate programs and encourage promising scholarship and research while giving greater stress to the development of first-class undergraduate education.

At Boston there is an additional challenge—to prove that a university campus which is responsive to an urban environment, which serves a substantial number of older, part-time students, and which offers both professional education and liberal arts at the undergraduate level, is entitled to a reputation for excellence in the world of higher education.

We are convinced that the dilemmas we have stated can be resolved. Placing a ceiling on campus size at Amherst is an opportunity to consolidate and strengthen the great advances that have been made, a chance to channel energy toward fulfillment of the potential of institutional excellence and the established national reputation that Amherst deserves. An "urban" orientation for Boston is a fine opportunity for another kind of greatness. The older urban universities of the nation are in many ways held back by their traditional patterns; Boston's chance is to be the urban university of the future.

A DIVERSE STUDENT BODY

One key factor in the determination of academic directions is the nature of the student body.

The University's student body is already diverse—not just racially, ethnically, and economically, but in terms of interests, temperament, goals, motivation, and values.

There are future scholars and salesmen, lawyers and engineers, teachers and nurses. There are some who will raise a family and perhaps work only part-time or casually or never. There are others who after graduation will choose to drive a taxi, repair automobiles or do carpentry.

There are student politicians and journalists and people who have no interest whatever in extra-curricular activities; people who go to peace demonstrations, people who register to vote, people who have given up on both, and people who never thought

either was important in the first place; people who watch television ten hours a day; people who have to hold a job full-time to support themselves, and people who have never had a job.

There are people who go to class and study diligently and people who never do either. There are people who sleep at night and get up every morning, and people who stay up all night and sleep all day. There are people who go to the church they grew up with, people who reject religion, and people who are studying Zen or practicing yoga. There are people who take drugs regularly, and people who drink a lot, people who experiment with one or the other, and people who do neither.

There are people who seek out faculty members for discussion and challenge teachers' assertions in class, people who think talking to faculty members is a waste of time, and people who lack the confidence to try. There are people who enjoy reading books, people who find reading a great burden, and people who like to read but not what is assigned in class.

There are people who know exactly what they want from college and people who don't know what they are doing there. There are people who see university as a preparation for life and possibly also a career and people who see it as something to suffer through, or perhaps to leave as soon as possible.

There are people who like the place, people who hate it, and people who are indifferent about the whole thing.

But if the University is diverse now, it should be even more diverse 10 years from now, and the academic implications of those changes are substantial. The growth in the number of black students, for example, revealed not only a need for a program in Afro-American Studies, but also a need to look at the rest of the curriculum from a black perspective. The latter task, especially, is far from finished, and recognition is only beginning to come that there is a related responsibility to recruit black students into previously white-dominated scholarly and other careers.

There is a similar need for conscious attention to the role of women students and what they study. How can the University attract female students to male-dominated fields like the sciences? How can it help to improve the status of women within various fields, and to improve the quality and status of the "traditionally female" fields like teaching and home economics? How can it help end the "traditionally female" status of such fields? How can it assist in encouraging the acceptance by employers of part-time employment patterns suitable to many women, and the development of day-care centers? How much emphasis should it put on offering options in areas like nutrition, child development, and

family living?

Perhaps the largest foreseeable new problem will be that of what to do for older students. To the extent possible, it is our hope that older students will be integrated into normal University programs. Adult education has traditionally been segregated into an evening or extension division, taught by a separate or at least a moonlighting faculty, offered substantially on a non-credit basis, and viewed generally as second-class. If the educational opportunities for older students are to be of value, and if they are to stimulate significant interest, these distinctions must be ended. Equally important, we believe it will benefit both the older students and the younger regular students to share experiences and points of view in the classroom.

At least at Amherst, it may be that the continuing education staff should serve as a research and development resource to initiate new academic programs specifically geared to older students, but these programs should be merged into the regular academic process as quickly as possible. Thus the degree program for older students now under consideration for Amherst should be integrated into the ongoing academic organization of the campus, if and when it becomes operative.

The content of programs for older students is a key question. Especially in Boston, there are already many options for older students to pursue the liberal arts—the kind of later-life education that can enrich the leisure hours. Lacking throughout the state are degree-oriented programs to help people move up career ladders and change skills. That, we think, should be the priority for program development, bearing in mind that we are talking, as always, about those rungs on a career ladder which are appropriate to a university level institution.

In order to promote the largest possible sharing of the learning process, as well as a physical and temporal accessibility that ensures a clientele other than affluent housewives, a variety of options in time and place are needed: courses during the day and evening and even week-end; and courses on campus, in local high schools, businesses, and public agencies, and using new technologies. All of these options should be available to all students.

This mix of options will not produce a perfect mix of students. Younger students by and large will still prefer three class meetings a week of one hour each during the day, and most older students are likely to prefer one longer session a week in the evening. Still, if efforts are made to make the options of equal quality, there will be younger students who work and prefer the evenings, who would prefer going to class closer to

home, or who would try courses using new technological approaches. And there will be some older students who are willing to come to campus. We believe the value to be realized by integration of varied student types is clearly worth the inevitable administrative difficulty.

A key question in this is whether faculty will be willing to teach at odd times (for them) and at places other than the campus. Some faculty may have to be specially hired, but we think that faculty who teach older students should be retained and judged by the same criteria as the rest of the faculty. And, insofar as possible, the teachers of the varying age groups should be the same people.

The matter of degree-orientation is equally important. We believe non-degree-oriented "continuing education" in the sense of short courses and conferences to help people stay abreast of new developments in their field is worthwhile, and we discuss it at length in the following chapter. But courses which would lead to a degree if a younger student took them should be available for credit to all ages. A major purpose of later-life education for many will be the economic value of a credential, and it would defeat the purpose of extending the opportunity if it were extended without credit. Thus the balance between degree and non-degree programs for older students must be altered.

FACULTY VIEWS

If the nature of the student body is one kind of determinant of academic direction, the views of the faculty are another. The faculty are the professionals in the academic process, the people whose competence and values will ultimately determine whether academic change will occur and whether it will succeed.

We surveyed the faculty at Amherst, receiving replies from nearly half of them, an excellent cross-section of departments and schools, of age, rank, and sex, and of tenured and non-tenured appointees. Regrettably, we did not have the staff resources to survey the faculty at Boston as well, although our questionnaire could easily be adapted for a survey at Boston if that is desired.

The faculty at Amherst express attitudes very consonant with the academic recommendations we make herein—they show a willingness to change in the direction of improved teaching and service while not undermining traditional scholarly values. Their views legitimate a healthy balance between change and continuity for the institution.

The faculty already spend more time on undergraduate teaching than any other activity. Asked how they would distribute their time ideally, they show a clear desire for more time in research activity, and less in administrative duties. Relatively few are dissatisfied with the amount of time they spend on undergraduate teaching.

The material in Tables I-III gives quite a clear picture of the combination of change orientation and adherence to traditional values.

Table I shows that the respondents overwhelmingly favored greater time flexibility in the learning process, field work in courses, and use of adjunct faculty. A substantial majority favored student participation in course design, introduction of teaching-oriented graduate degrees, and consideration of public service in the granting of tenure. And a substantial majority opposed having the University's primary undergraduate concentration be in the liberal arts.

TABLE I

VIEWS OF UMASS/AMHERST FACULTY MEMBERS
ON VARIOUS ACADEMIC ISSUES

	Agree or Agree Somewhat	Neutral	Disagree or Disagree Somewhat	Not Ascertained
With appropriate safeguards, students should be given credit for field work which relates to their academic program	80%	7%	11%	2%
Public service is an obligation of faculty members at a public university which should be considered in granting them promotion and tenure	60%	12%	27%	1%
Students should have the opportunity to help design their own courses	63%	8%	27%	2%
The traditional pattern of undergraduate education, four years immediately following high school, assumes a similarity among students which may not exist. Some students could easily accelerate their program while others might profit from extending their studies, including periods of time off campus.	90%	5%	4%	1%

TABLE I (Continued)

	Agree or Agree Somewhat	Neutral	Disagree or Disagree Somewhat	Not Ascertained
People with non-academic experience (i.e., lawyers, political figures, businessmen, etc.) should be allowed to teach courses along with regular faculty.	73%	10%	16%	1%
The hierarchy of graduate degrees is too rigid and could be loosened up by offering new degrees such as the Doctor of Arts which stress teaching rather than the ability to do research	62%	9%	28%	1%
Undergraduate education at the university should concentrate on the liberal arts. Professional and technical training should be offered at specialized institutions and/or graduate programs.	24%	7%	68%	1%
The power of departments tends to impede academic innovations such as interdisciplinary courses.	54%	11%	33%	2%

TOTAL — 647 replies

Table II suggests that the most serious problems the faculty sees at Amherst are not enough funds for research, student apathy, the impersonality of student living conditions and their lack of relation to the learning process, and the size of the University. A smaller group of respondents, but still a majority, see as serious or moderate problems an unresponsiveness of faculty to academic change, lack of priority for innovative programs, lack of faculty interest in students, and excessively traditional curriculum. Few see faculty salaries as too low or teaching leads as too heavy. Table II follows.

TABLE II

FACULTY MEMBERS AT UMASS/AMHERST,
RATING OF SERIOUSNESS OF PROBLEMS AT THE UNIVERSITY

	Serious	Moderate	Minor	Not Ascertained
Not enough funds for research	42%	34%	21%	3%
Student apathy	37%	48%	13%	2%
Present student living conditions too impersonal, not related enough to learning process	36%	33%	26%	5%
University too large	33%	37%	28%	2%
Faculty unresponsive to change	22%	39%	37%	2%
Not enough priority given to innovative programs	17%	39%	42%	2%
Faculty not interested in students	16%	44%	38%	2%
University neglects obligations to community service	15%	33%	49%	3%
Curriculum too traditional	13%	46%	40%	1%
Administration unresponsive to change	11%	33%	53%	3%
Teaching loads too heavy	8%	30%	59%	3%
Faculty salaries too low	4%	32%	62%	2%

TOTAL— 647 replies

74 50 5

Table III shows more books for the library to be the overwhelming budgetary priority of the faculty, with more student scholarship and loan aid also receiving great emphasis. Lesser, but still very substantial majorities give high or medium priority to such items as merit increases for teaching and community service, new technology for the library, more funds for applied research on societal problems, more research funds generally, and new faculty positions in inter-disciplinary and other new areas related to contemporary problems. On the other hand, few attach a high priority to new dormitories, raises in faculty salaries across the board, more classrooms of the current type, new graduate faculty positions in the arts and sciences, or new faculty positions across the board. Table III follows.

TABLE III

RATING OF PRIORITIES FOR THE BUDGET BY UMASS/ AMHERST FACULTY MEMBERS

	High	Medium	Low	Not Ascertained
More books for library	70%	24%	4%	2%
More student scholarship and loan aid	59%	32%	6%	3%
New categories of merit increases in faculty salaries for teaching and community service	46%	32%	19%	3%
New technology for library	45%	33%	17%	5%
More funds for research applied to societal and community problems	44%	38%	16%	2%
More research facilities and equipment across the board	40%	36%	20%	4%
New faculty positions in new areas-interdisciplinary, approaches to contemporary problems	40%	34%	22%	4%
New undergraduate faculty positions	27%	42%	25%	6%
New educational technology	27%	39%	29%	5%
More classrooms in residential settings	25%	37%	34%	4%
Administrative positions, including advising, counseling, placement, and mental health services	21%	42%	34%	3%
New professional schools	21%	37%	38%	4%

TABLE III (Continued)

	High	Medium	Low	Not Ascertained
New professional faculty positions	20%	39%	31%	10%
New faculty positions across the board	19%	41%	36%	4%
New graduate faculty positions - arts & sciences	18%	38%	38%	6%
More classrooms of current type	17%	41%	36%	6%
Raises in faculty salaries across the board	14%	42%	40%	4%
New dormitories	10%	38%	46%	6%

TOTAL— 647 replies

We are reassured by our findings that faculty involvement in the process of academic change, beyond being an institutional necessity, is likely to be reasonably widespread and enthusiastic. The professional autonomy and expertise of faculty will be key factors in bringing about our suggested changes.

THE FRESHMAN YEAR

For many entering students at the University of Massachusetts, college is an alien experience in a variety of ways. Many of them — nearly half of last year's entering class at Amherst— are the first generation of their family to go to college.[1] For many of those at Amherst, the University is their first extended period away from home. Many went to high schools in which the style and approach were relatively traditional and inflexible, and in which grades and not intellectual exploration and risk-taking were paramount.

The freshman year introduces these students to university life. It is the single largest determinant of the quality of their university experience.

Yet the freshman year is also a time when students receive too little attention. Advising and counseling are weak. Freshmen often find courses they want to take filled up before they can enroll. They frequently end up in large classes which become an

1. Office of Institutional Studies, UMA, Characteristics of Entering Freshmen, Fall 1966 Through Fall 1970, April, 1971, p. 3.

exercise in good note-taking and memorizing, with little opportunity for personal contact with the teacher or for interchange of ideas. Too often, freshman courses do not respond to the developmental needs of freshmen, which one recent study summarized as "enhancement of their self-image, an opportunity to form judgments, and relating these judgments to themselves."[2] The freshman year reveals the imperfect allocation of resources within the University. The students who are going through the most difficult process of adjustment are the ones who are in the largest classes and receive the least attention.

The academic center of the freshman year is the core curriculum. The core curriculum concept is the heritage of a time when, as during the presidency of Robert Maynard Hutchins at the University of Chicago, there was still a consensus about the introduction which every educated person should receive to knowledge and culture.

Now, when people are less sure what the educated person should know, universities have substituted a variety of choices for the old monolithic core curriculum. The purpose is no longer to introduce the student to a body of knowledge, but rather to expose him or her to ways of looking at knowledge. The method, however, needs re-examination.

Thus, while the entering freshman at Amherst is required to take two courses in rhetoric (English composition), three courses in the humanities and fine arts, three in the social and behavioral sciences and three in mathematics and natural sciences, there are now a wide variety of courses available to fulfill the requirements. The side-effect of this commendable broadening of choice has unfortunately been a high incidence of confusion. In one department, for example, 84 courses are listed as acceptable core requirement offerings.

The situation at Boston is in the process of change. Earlier this year the University Senate there abolished all core requirements. Later, an interim set of core and distributional requirements was established pending the division of the campus into individual colleges. The interim requirements include a freshman writing course, a foreign language for those who have not demonstrated proficiency, three courses in social science of which one must be in history, and three courses in the natural sciences or mathematics. The major departure is that, as an alternative to these requirements, a student may design his own core curriculum in consultation with a faculty advisor or with an advising committee. The Amherst campus also offers an individually designed

2. The Student in Higher Education, Report of the Committee on the Student in Higher Education (The Hazen Foundation, New Haven, Connecticut, January, 1968), p. 11.

core curriculum on a limited basis.

We believe the University's responsibility goes beyond enlarging the number of choices, as indeed the campuses have begun to recognize. The current predominant system of sending first and second year students through a series of largely unrelated introductory courses is not sufficient, particularly in the absence of a much better advising program than exists now.

We suggest one direction for change below. The faculty will surely have other ideas and proposals.

We suggest that the faculty at both Amherst and Boston consider an experimental freshman year program which seeks to involve students in beginning to apply the various disciplines to specific problems; to help them make reasonably well informed choices about their academic and career goals; and to expose them to moral and social values implicit in the acquisition and utilization of knowledge.

This new freshman year would seek to resolve the dilemma between telling students there are certain things they must know when they may not be interested in those things, and letting students study whatever they want when by doing so they might miss something they would have found important.

Our idea is that a quarter to a third of the freshman's course time would be prescribed for him in the form of three basic units, one each in the social sciences, the natural sciences, and the humanities and arts. The rest of his time would be spent in pursuing a number of optional offshoots from the basic courses, with the possibility of self-design of some of the offshoots.

The three basic units would each be designed to integrate several disciplines and to employ them in analyzing specific events and problems. The tendency now is to present the student with the end result, the product of professional research and experience. But problem-oriented work would give students the opportunity to learn how professionals operate, and what the process of acquiring knowledge is.

Simply put, the student should be exposed not only to what sociology is but also to what sociologists do. We think this kind of experience will tend to knit student and professor in a shared enterprise of discovery that is generally reserved for upper-level and graduate students.

The three basic courses would be supplemented by a wide range of special optional courses designed for this new program. Most should be quite small in size. Included in the offshoot courses would be skill development courses for students who need them. It should also be possible for offshoot courses to come into being in response to the shared interest of several students. For

example, if several students wished to spend more time on the history of the civil rights movement as an offshoot to their study of race relations in the basic social sciences unit, such a course should be possible.[3]

We cannot stress strongly enough our view that this program be designed so that its content and approach can be frequently evaluated by faculty and students. If a process of frequent evaluation can be set up, and if students can share in the process, the possibility of success for the new program will be greatly enhanced.

The success of any revised freshman year program, whether it be the one outlined above or any other, also depends largely, indeed predominantly, upon the strength of the teaching. Later in this chapter, with an eye to strengthening the teaching ethos at the freshman level, we suggest a teaching-oriented University professoriate— a cadre of professors whose mission at UMass will be to excel in teaching.

A third key element in the success of the program will be the strength of the advising system. Freshmen need to be helped in choosing courses, in measuring their progress, in learning efficient ways to use their time and in many other matters. A vastly improved advising system will be essential. The modified approach to the freshman year which the Boston campus has adopted has already exposed the need for greatly increased attention to advising.

We are not certain whether this or any other new freshman program is appropriate for all freshmen. It may, for example, not be appropriate for older students, particularly if they are part-time students. Some students may be sufficiently sure of their direction so as not to need an introductory year, and some may be able to justify a greater measure of independent study. It may need to be modified for the professional schools, and for the new College III of Public and Community Service at Boston. We suggest, therefore, that any new program be designed initially for less than all of the freshman, but enough so the experiment has meaning— perhaps 500 to 700 freshmen at Amherst, and 200 to 300 freshmen at Boston. It should be possible for it to be initiated by the fall of 1973 at that scale. An effort should be made to recruit a cross-section of freshmen for it, and then a process of evaluation might begin, aimed at defining how widely it can be extended and how it might be adapted for part-time and professional students.

3. The idea of offshoot courses to engage in small group exploration draws on the experience of freshman seminars at Harvard which, while costly, are thought to have been a useful way to introduce freshmen to the world of disciplines, to the resolution of problems, and to the large issues which cut across all the disciplines. See Bell, The Reforming of General Education, (Anchor Books, Doubleday Co., Inc., Garden City, New York, 1968), pp. 189-90.

We are well aware of the difficulties involved in improving the freshman year. It will cost money— in smaller class size, intensified advising, and more skill development work. That money will either have to be taken from other areas or obtained from the legislature, or some of both. We know there is a long history of failed efforts at freshman year reform in various universities. Nonetheless, the present situation presents a number of difficulties, and an effort at significant change should be attempted.

UNDERGRADUATE LEARNING— A DIVERSITY OF OPTIONS

Beyond the freshman year, we see the challenge of the seventies as being to produce a diversity of undergraduate options that responds to the diversity of needs and the diversity of students.

The goals and values which underlie our stress on a diverse curriculum are varied. Diversity of program stems from such considerations as that the undergraduate curriculum should avoid impersonality, meet real career needs and pressing societal needs, make the most effective use of educational resources and students' time, relate classroom work more directly to the world beyond the campus, educate better citizens, and promote physical accessibility.

There are three kinds of diversity here:
1) diversity of structure— learning both through standard programs and by way of independent study, and both within disciplines and across disciplinary lines; 2) diversity of place — learning both on and off campus; and 3) diversity of time — learning both full-time and part-time, and on a drop-out, drop-in basis.

1. **Diversity of Structure.** Diversity of structure is two interrelated issues— prescription vs. flexibility in a student's program, and options for learning which cross traditional disciplinary lines.

Some students will learn best in an atmosphere of maximum flexibility and freedom. There are others, as the Newman Report says, "for whom a 'structured' curriculum is essential for their development," and there is "the individual who wants a college education but lacks the motivation or self-confidence to direct himself."[4]

4. **Report on Higher Education, supra, p. 22.**

A full panoply of options should therefore be available, backed up by a sophisticated system of advising, and ranging from well-designed pre-planned programs on the one side, to individually designed degree programs involving considerable independent study on the other. Independent study is already developing, particularly on the Amherst campus with the 385 and 386 courses which many departments have, with Project 10 in the Southwest dormitory area, with the honors program, and in the School of Education. We believe there should be more of it for the appropriate students, although we would caution that it must be supported by a strong advising system.

Overlapping the diversity of student needs is the diversity of knowledge. That knowledge no longer comes as neatly wrapped in packages called disciplines as perhaps it once did is by now a truism. The great problems of our time and the foreseeable future require skills and capacities which do not fit neatly within disciplinary lines as we know them. Yet the disciplines have been with us for a long period of time, and have proved adaptable to changes in the nature of knowledge before. Rather than create what we think would be an unnecessary and rather pointless conflict between the discipline-oriented and the cross- or inter-disciplinary oriented, we would formulate the need for change in another way.

We would see it in terms of a continuum. At one end would be the traditional disciplines, adapted and changed in response to new problems which have come along. At the other would be individually designed student programs which cut across disciplinary lines and require learning in two or more disciplines. Problem-oriented and applied research might be done on a project-by-project, team basis cutting across department lines, too. In the middle would be new, formally organized units based on the conclusion that, in whatever area is involved, the discipline lines have been crossed so regularly that it is time to create a new cross-disciplinary discipline. Some multidisciplinary fields—biochemistry, polymer science and marine science—have already achieved formal organization and recognition in the University community.

Thus there should, in short, be room for students to create their own study programs and faculty to create their own research efforts when present disciplinary lines do not fit their interest. And there should be room for such approaches to be institutionalized when the case can be made for that.

Bachelor's Degree in Individual Concentration. The individually designed study program already exists at Amherst (but not at

Boston) in the form of the Bachelor's Degree in Individual Concentration, which began in the 1970-71 academic year with forty students, and now has close to 100 participants. Administered by an inter-disciplinary faculty committee, the program involves a specially designed major chosen by the student and a faculty sponsor and taken in either the sophomore-junior or junior-senior years. Generally speaking, the individualized major is constructed out of existing courses in a number of departments and schools (although some students have pursued parts of their interest through independent study). Thus one student interested in mental retardation took courses in the psychology department, in the School of Education, and in the School of Physical Education. Another, interested in medical illustration, took courses in art, zoology, and other relevant sciences. Other self-designed majors included ecological psychology, the law and social problems, creativity, and design and business. The Board of Trustees gave the program a 2 year mandate when it began. That would end next June, so the administrators of the program will begin seeking approval for a permanent program this fall. We believe the BDIC concept is an excellent idea, and we urge that it be expanded at Amherst and established at Boston.

Re-examining the Content of Majors. At the other end of the continuum, there is a need to re-examine programs for the larger group of undergraduates for whom an individualized option is inappropriate. We think some existing majors tend to be organized as though the student is going on to graduate school in that field, stressing the academic uses of the discipline rather than, for example, how it is used to deal with the problems of industry, government, or other institutions and situations. Since most UMass graduates do not go to graduate school, it seems appropriate to question how well the standard "academic major" serves them. We urge the faculty to re-examine the content of majors for the seventies. We think that current majors could be broadened and new joint majors created. Self-study for content, timeliness, and relation to other bodies of learning might result in new majors, new flexibility within majors, and new, cross-disciplinary courses.

Problem-oriented Units. The middle point in our continuum is the new organized entity that results when steps outside of the disciplines in one direction or another become a beaten track. This we will call the "problem-oriented unit." It is a "unit" because it is bigger than a "program," smaller than a "college," and different from an "institute" or a "center," or at least from what institutes and centers have tended to be in the past. Perhaps

the closest current name for it would be "department," although it is not quite that either, since it would draw on the departments and schools for many of its courses and associated faculty. In any event, it would be both a teaching (primarily undergraduate but also graduate) and a research and public service unit.[5]

We think there are two such units which could be established at Amherst almost immediately, one of which is already coming into being in a more modest form. The two would be units in environmental problems and urban studies. These two areas not only represent major problems in the Commonwealth and in society today, but are also areas where the path is sufficiently clear to justify institutionalization.

At present, there is no undergraduate major in urban studies at Amherst. Courses related to urban problems may be found in the departments of economics, government, history, sociology, and public health, in the Schools of Engineering, Business Administration, and Education, and in the College of Agriculture. These courses and the people who teach them represent a strong initial nucleus for an urban studies, problem-oriented unit.

The Committee recognizes that when we speak of urban studies, we are in reality speaking of a series of concerns—jobs, welfare, housing, transportation, education, and so on. The urban studies unit should teach students of the interrelationships among these urban subsystems. It should also raise in the minds of students larger questions of value: What is the role of the city in modern society and how can public policies to effectuate that role be democratically devised?

Since, however, the city is a massive subject, the urban unit should build most of its curriculum and its research and service activities around a limited number of problem foci, especially at its outset.

Before our work began, the University at Amherst began planning an "Institute on Man and His Environment." The present plans for this Institute are consistent with our vision of what a "problem-oriented" unit should be. Accordingly, this Institute should be viewed as a base for creating a problem-oriented unit on environmental problems.

At the Amherst campus, presently, there are more than forty different undergraduate courses dealing with environmental concerns, scattered through various schools and departments including

5. The discussion of structure and disciplinary lines thus far has been equally applicable to both Amherst and Boston. While the problem-oriented units we are suggesting could certainly be developed at Boston, we think the priority there is to get some larger new entities like College III launched. Therefore, this sub-section should be read more with Amherst in mind than Boston. College III is also problem-oriented in its conception, but it would be much larger, more autonomous, and professionally-oriented as well as problem-oriented. We therefore discuss it separately below.

the Schools of Engineering, Business Administration, and Education, the College of Agriculture, and the Departments of Botany, Environmental Sciences, Sociology, and Public Health. Additionally, there are undergraduate majors in specific areas of environmental concern in the Departments of Public Health, Landscape Architecture, General Business and Finance, Civil Engineering, and Environmental Sciences. On the graduate level, there are degree programs offered in the Department of Civil Engineering, the Water Resources Research Center, and the Business and Economic Research Center. There are interdisciplinary courses in marine science offered in conjunction with the Marine Station at Gloucester.

A major function of the environmental problems unit would be to coordinate and to bring into focus these disconnected environmental study courses and programs. A center for environmental studies would aim at pooling the skills available in agriculture, engineering, and the natural and social sciences, and offering them on a consultative basis to formal and informal planning groups throughout the New England area. It would provide the region with the capacity to undertake comprehensive environmental planning, and to study the implications and consequences of continued industrialization and growth.

We believe that planning might also begin fairly quickly for three or more additional units. There are many problem areas which might be considered as subjects for future problem-oriented units.

For example, a unit formed around the issues of mass culture and quality of American life might consider such questions as: what has been the fate of the classical art forms—drama, dance, music, literature—in our mass culture, and why? What should be the University's role in relation to the arts in society? The unit could bring practicing artists—painters, dancers, actors, authors—together with professors of literature, drama, art history and journalism to ponder these issues with students and to develop University outreach projects which might further the fine and/or mass arts in towns and cities throughout the state.

The problem-oriented units would be bases for some of the new approaches to undergraduate learning needed in the seventies: helping students relate their learning directly to significant current issues in society at large; creating educational experiences which are well-grounded in the liberal arts but also related to the process of social change; developing the intellectual and scholarly powers of students in a contemporary context; learning by doing, putting training to use in projects throughout the State.

Every unit would offer a program for undergraduates; most

units would also sponsor graduate programs. In addition, each unit would act as a clearing house for regular university courses offered in fields related to the problem unit's particular focus. Serving as a coordinating body, the unit would avoid duplicate efforts among departments.

The problem-oriented units should help integrate the present disciplines so as to facilitate production of problem-oriented knowledge which is both theoretical and applied. The over-all result should be an exciting model for combining teaching and research with public service.

As conditions in society and on the campuses change, the University must be able to arrange and re-arrange these coalitions of scholars, many of whom will come from the regular departments, to form new centers of inquiry. In the interest of such flexibility, we think each problem-oriented unit should be given a limited initial life, and that its mission and performance should be re-examined periodically. If over time the justification for a unit no longer exists, it should be dissolved.

We should distinguish these units from the institutes and centers which proliferated at universities during the fifties and sixties. They were mainly research centers funded by outside money, which functioned as semi-autonomous units detached from the main business of the University. We envision the problem-oriented units as basically funded by state appropriations just as departments are, as having teaching responsibilities just as departments do, and as playing a major catalytic role in the day-to-day life of the University, helping scholars and teachers from the departments to join together in the new teaching and knowledge seeking combination.

College III at Boston. In Boston, we share the judgment of others on the campus that the problem-oriented approach should be applied initially in macrocosm, not as a series of small units but as a problem-oriented professional school—a college of public and community service. The present master plan for UMB is for its projected 15,000 students to be divided into six-semi-autonomous colleges, each with 2,000 undergraduates and 500 graduate students. In accordance with this plan, the 4,000-plus students now at UMB are in the process of being divided into two liberal arts oriented colleges, and planning is under way for the third college. In terms of the number of students, the so-called "College III" is the largest new educational program presently under development within the University. Intended to open in the fall of 1972, it will by 1975 be educating as many undergraduates as most of the small colleges in the Commonwealth. The direction

8 3561

it takes is therefore extremely important.

The Chancellor of UMB has been clear in his view that it should be a college of public and community service. He has pointed out that many students at UMB do not go on to graduate school, and look instead to their college education as a preparation for professional careers. He has said further that it would be in keeping with UMB's urban setting and its responsibilities to the urban community if it were to offer programs to prepare students for careers in public service. These views were sustained by the University Committee to Plan College III appointed by the Chancellor early this year, which reported back to him and to the University Senate this June.[6]

Why, among various possible professional programs, should careers in public and community service be chosen? The services generally, and the public sector in particular, are the fastest growing portions of the economy, and there is consequently a great shortage of competently trained professionals in the area. Except in traditional fields like education and social work, universities have in general trained people for public service at the graduate level, usually in public administration and planning programs, and then only in limited numbers. Some specific kinds of technicians and allied professionals have been trained in community colleges, but the thousands of middle-level professionals who are the backbone of local, state and federal government generally receive no university education that is specifically geared to their work, let alone a program which combines the focus of professional training with the breadth and values associated with the liberal arts. It is that sort of program which we propose for College III.

College III should disclaim the traditional separation between professional education and liberal learning. Unlike the narrow, often functionless functionalism of undergraduate professional schools of the past, it should be a new model for undergraduate professional education. It should be as deeply committed to the intellectual values associated with the liberal arts—the capacity for self-criticism, the ability to take a large view, the readiness to change—as it is to conveying some specialized skills. Its premise should be that an undergraduate curriculum, making use of the disciplines where appropriate but organized from a career point of view, can be an effective vehicle for instilling the breadth and perspective necessary for effective public service.

The step from the problem-oriented unit to a career-oriented program is an important one. The graduates of College III must do more than understand; they must be able to put their understanding to work. College III should be concerned above all else

6. Report of the University Committee to Plan College III, June, 1971, p. 1.

with building links between understanding and effective action. Its program should include opportunities for field work and work experience. The University Committee to Plan College III was very strong in its support of field experience as an integral part of the new school.[7]

If the program of College III is to build links between the liberal arts and careers, between understanding and action, its faculty should include people with the full range of skills and perspectives that this conception implies. It should attempt to find as many individuals as it can who are comfortable in a discipline and also are familiar with the problems and careers of concern to the College. But to obtain all the perspectives needed for its program, the College will probably have to draw on individuals without conventional academic credentials or academicians without professional experience.

The College should look to the agencies to provide instructional talents as well as to its full-time faculty. Adjunct appointments to able people actively involved in the careers for which the college is preparing students will draw into the program men and women who can add valuable insights, and will also build links between the College and the agencies that will be useful in field placements.

College III should be especially imaginative about admissions criteria. Its mission requires that it develop sophisticated mechanisms for identifying talent in individuals who may not meet conventional standards. It will have to develop means of taking people at various ages and levels of developed competence and offering degree programs suitable to their needs. The specific arrangements with poverty organizations and government agencies which we described in the previous chapter will play a key role in this flexible admissions process.

The list of possible careers which the college could cover is very long: community and neighborhood services, corrections, day care, employment and job training, family and children services, geriatric services, health careers, hospital and nursing home administration, housing, mental health, mental retardation, welfare, and a host of other government and related careers we have not listed. And of course each area has within it a wide variety of jobs. The college will have to begin with a limited number—those where there are societal needs and employment possibilities, and where there is the opportunity for public service by students and faculty as part of the academic curriculum.

7. Report of the University Committee to Plan College III, supra, pp. 6-7. Another major recommendation of the committee was that credit be attainable by certification of demonstrated competence in an area rather than solely by the traditional process of spending prescribed time in course work. Id., pp. 4-6. We endorse this recommendation as well.

The faculty of the college should also be deeply involved in continuing education—i.e., in addition to the type of program just described, they should assist UMB's continuing education staff in developing and offering short courses, seminars, and conferences to help urban professionals keep up with new developments in the fields of College III's expertise.

College III is the crucial next step for the Boston campus, the step which will have a major influence in determining the direction of that campus for the rest of the decade.

2. **Diversity of Place.** The second diversity is in where learning takes place, whether on or off campus.

Field Work in Courses. The simplest application of this is the introduction of more field work into the present course structure, which we strongly urge the faculty to consider. There are some fields, of course, such as mathematics, literature and history, where field work is difficult to imagine. But in other disciplines it is quite practicable, and in some cases already going on. An engineering student might work for a period with a city pollution abatement team and evaluate some of its problems; a student in political science might report of the process by which certain state legislation was enacted or defeated; a psychology student who plans to go to law school might investigate the psychology of patient life in a local hospital along with patients' legal rights. There are many opportunities of this kind, experiences which can be evaluated within the framework of existing courses.

The field work opportunities will have to be developed, of course, and matched to appropriate disciplines and academic programs. And academic supervision, including appropriate ways for the student to share and examine his experience with faculty and other students, is an essential part of the process. To encourage the introduction of field work into courses and perform the placement finding and matchmaking functions, it might be well if there were a person with campus-wide responsibility in field work, probably in the Provost's Office.

A Year or Semester of Field Work. The next level of complexity in the application of the concept of diversity of place is the academic year or semester off campus, for credit. We believe that the creation of extended off-campus learning opportunities is important. At the same time, we recognize that there are legitimate faculty concerns with the nature of academic supervision and related matters which have to be worked out before granting of credit is appropriate.

The matters have been worked out, and with remarkable speed, in the University Year in Action, a new federally sponsored program in which the University is participating. For the 1971-72 academic year, 80 juniors at Amherst and Boston combined are in the program. Each of them has been placed for the year, like VISTA volunteers in the past, with an agency or organization dealing with the problems of the poor. They are supervised by personnel from the agency and by faculty, and a process of continuing academic feedback—sharing and evaluating experiences with other students and with faculty—has been developed, too. The student receives a small federally financed stipend for the year's work.

We think this program is very worthwhile. If it is successful, it will open up new perspectives for many students, letting them learn and serve simultaneously and giving them insight into the application of many of the ideas and problems they will have dealt with conceptually in their course work. It is a constructive step, and should be only the beginning of such activity.

University Without Walls. Another variant on the principle of diversity of place is the University Without Walls, a joint project of 17 colleges which has been planned under federal and foundation auspices, and in which the University's School of Education is participating. The idea is multifold. The UWW would be an "institution" for people who cannot come to regular campuses: prisoners, invalids, and the geographically remote. It would also be an "institution" for people who would do better in a more flexible regimen than that of going to class regularly in one place. The former group might use prepared and assigned materials, the latter more independent study. Since the initial idea, at least, is that each person's program would be individually negotiated and supervised, the University Without Walls is not an option which would appear to be feasible on a mass basis, but it does seem to be a useful vehicle for some and should be pursued.

The "Open University" and New Technology. As important as each is, none of the above options will make learning more accessible physically to any substantial number of people in the Commonwealth.

We propose that the University consider pursuing this objective through a new unit patterned partially after the Open University which opened its doors in England earlier this year.

There would, however, be one major difference. The students of the British Open University take no conventional classes. Their entire university experience is a combination of packaged materials

exchanged by mail, lecture and other programs over the BBC, and work with tutors at satellite learning centers located throughout the country. We think the Massachusetts Open University students should also be able to take courses on campus and that regular students should be able to take courses in the open unit.

If the "open university" program offers the opportunity to learn on campus as well as through packaged materials, television, and tutoring, it will enrich the life of all of the campuses and engage its students that much more effectively as well. If its courses are available to primarily campus-based students as an alternative, they may find that they prefer to acquire some of their learning in the "open" unit. Most important, there will be courses which it will be impracticable to offer in any way except partly on campus. Laboratories, for example, cannot be moved, and advanced courses in many fields will be demanded by too few to justify the cost of packaging them. Making the "open" unit part of existing colleges will enrich both.

Making the "open university" part of existing institutions will also help ensure that its degree will be a respected credential, the same degree that other graduates of the participating institutions receive. We are concerned that a separately constituted Open University would be unable to acquire the stature and prestige it would desperately need to avoid being a glorified correspondence school.

Not only should it be part of existing institutions; it should probably be developed co-operatively among several universities and colleges in the State or even regionally. An open unit which really attempts to experiment with new uses of technology and new curriculum content and materials is a costly enterprise. It has been estimated that the British system, if implemented here, might cost as much as $25 million to develop. To do it on any halfway basis, we think, would be to ignore a major aspect of the opportunity, which is to use the new media in their most imaginative and effective ways.

For this reason we believe consideration should be given to developing the "open" unit cooperatively.

The benefits of cooperative development go beyond spreading the cost. Under a cooperative arrangement the best minds in the Commonwealth could be used for the development of curriculum. The resources of several institutions could be used as learning centers. Moreover, a variety of degrees and programs could be offered. Through the mechanism of the "open university", community colleges could offer technical and vocational programs while the University offered more intellectually rigorous programs appropriate to its mission.

Within the University, the "open" unit might be centered in a College IV at Boston, since the biggest single segment of the prospective clientele for the unit lives in the Boston area. Such a unit would not offer any courses on campus, but would rather be the administrative and educational policy center of the program. It would plan curriculum, produce materials and programs, develop recruiting and admissions procedures, work out arrangements for its students to take some of their courses on the various campuses of the University, make television or cable arrangements, and be responsible for the cooperative work with other institutions necessary to get the overall effort into operation, including cooperative development of the essential satellite learning centers.

Research into the application of new technology to the learning process would have to begin, too—two-way video may be possible within the next ten years, for example. It should be possible to install videotape cassette equipment in public libraries sooner than that, and computer-assisted instruction is coming along, too. With such equipment the variety of visual and other new materials could be expanded far beyond what can be done over the limited air time of television.

The benefits of finding new and exciting uses for educational technology would not accrue to the "open university" alone. The advent of technology, judiciously used, promises to have profound effects on the learning process on campus as well as off. Even if the idea of the "open university" is not formally institutionalized, we believe it is time to see whether there are ways to offer learning that are less costly than and equally effective as the stand-up lecture and the sit-down seminar. Learning opportunities for all students should include a mix of the traditional and the new technology, the on- and off-campus based course.

Whatever the structure adopted to begin work in this area, the planners will want to look carefully at Empire State College, the "open" unit of the State University of New York, which has begun operation with its first students this fall.

3. **Diversity of Time.** The normal pattern in American education is for the student, upon graduation from high school, to enter college immediately and finish in four consecutive years. Graduate study is normally pursued directly after college. Thus there are many young men and women who have gone to school for at least sixteen and often more than twenty consecutive years. We think that alternatives which enable students to intersperse their educational experiences with sustained experience out of school are needed.

In the previous chapter, we proposed a program enabling students who have been accepted for admission to defer entrance for one year, and that entering places be held for people who have taken time off. We further propose that for those students who would profit thereby, additional blocks of time out of college be encouraged. Students who would like to take time off to work, do volunteer services, travel, or whatever else should be encouraged to do so.[8]

The idea of "stopping-off" is hardly original with this Committee. Most commissions and task forces have supported it. We do want to insert a caveat, however. We wonder what the realistic work and service options for 19 to 20 year olds really are at the present time. We propose no remedies but do caution that before wide-scale use of the "stopping-off" principle can be adopted, realistic options will need to be developed.

One possible model is the University Year in Action program which was discussed earlier. This is not in itself a drop out option since the student will receive academic credit for the year. But, if successful, it will also serve as a useful model for other service programs that would make the idea of dropping out and dropping in a viable possibility. The main point, however, is that until the federal government provides major resources in this area, the idea of time flexibility during the undergraduate years will be a choice reserved primarily for the children of the affluent.

A "mini-version" of stopping off is the January term, also known as the 4-1-4 plan, a concept which uses the month of January for students to do a variety of short course projects away from the campus. This idea has been adopted at many institutions, including Hampshire College, and is under consideration at UMA at present. We think it is worthy of consideration at both campuses.

Related to the issue of going out and coming back in is that of pace. Many schools already use summer sessions to allow students to accelerate their education. The use of certification techniques to give a student credit for mastery of a block of knowledge when he can demonstrate it, whether by testing or otherwise, is another technique which should be considered. Whatever techniques are adopted, it should be possible for students who so desire to receive their B.A. in three years.

If some students wish to accelerate, others would like to go more slowly. If the three year B.A. is acceptable, so, too, should be the five and six year B.A.

8. Our survey of the Boston student body indicates that there is already a good deal of "stopping off" going on. Only 53 percent of our respondents had been in school continuously since high school; 26 percent had dropped out to work, 10 percent were in the armed forces, and 7 percent had dropped out to travel.

Some who will finish at the usual time would like to vary their pace as they go, taking more courses some semesters and fewer in others. Why does being a full-time student not include being more than full-time sometimes, and less at other times? Nor do all subjects necessarily require semester- or year-length treatment. Some learning may invite shorter courses such as those we suggested in discussing the freshman year. Policies need to be developed to experiment with and accommodate as many of these various forms of time flexibility as prove to be workable.

Still another time problem is the burdensome length of current programs which involve many years of postgraduate education and training. We doubt that all the time now involved is invariably necessary. In addition to the acceleration possibilities we just mentioned, we think serious effort must be made to shorten the over-all time of study. Medical schools, law schools and other graduate schools should be able to admit students after three years of undergraduate work—indeed, it is only relatively recently that many of them around the country stopped doing so, and some still do. Boston University and Cornell, for example, have recently instituted six year medical programs.

Equally helpful would be the creation of new degree options, which involve explicit "3-2" or "2-3" options for master's degrees in fields like business and engineering, and "3-3" and "4-2" options for legal education.

All of these are matters which we commend to the faculty and other appropriate segments of the University community for further discussion and study.

IMPROVING THE TEACHING ETHOS FOR UNDERGRADUATES

There are a number of inter-related structural changes which are important if undergraduate learning is to have a more prominent emphasis.

Advising and Counseling. An array of new options for undergraduate education will be more threatening than liberating in its effect if it is not accompanied by a vastly improved advising system. Good advising is an integral part of any academic program, and it becomes both more crucial and more costly as more course and program options and more opportunities for student self-design of courses and programs are created. Even if

the University's advising system were adequate to its present academic program, which it clearly is not, increased expenditures would be necessary to support the academic changes we have suggested. The system needs to be totally re-examined at both Amherst and Boston, from freshman orientation on.

We see several techniques to improve academic advising, and undoubtedly students, faculty, and administration can come up with other suggestions.

One approach would be to allow faculty members within a particular department who have a special aptitude or interest in advising to "specialize" in this function. It seems to make little sense to spread the advising function equally among all department members regardless of capability or interest. To make clear that this is not simply an additional chore but a job equal in importance to the other duties of faculty members, departments could provide released time from teaching courses and administrative duties to faculty members who spend considerable portions of their time in advising students. Departments could also improve their advising by assigning a graduate teaching assistant to keep the members of the department who are active in advising up to date on course and program changes throughout the University, and on current feelings about the relative merits of the various options.

A second idea would be to involve older undergraduates in academic advising in a more systematic way. The Counseling Office at Amherst has had good experience in training and using students both for the freshman orientation and in their regular counseling services; this precedent should be pursued. By the time they are juniors and seniors, students have acquired a good deal of knowledge about what the University has to offer and how to take advantage of it. If older students are given the proper training, what they know could usefully be made available on a systematic basis to other students. The recent course evaluation booklet at Amherst is a significant step in this direction. Beyond this, students could be organized into teams with a faculty member or professional guidance officer at their head. If these teams were organized on a departmental basis, they could also serve as advisory committees to the departments in devising course offerings more attuned to student needs. Some departments have already made moves in this direction. Many students would be willing to undertake such responsibilities if they were paid, and we think the job is important enough that they should be. It would also help if as much of the advising function as possible were carried on in the dormitories and other living units at Amherst.

Career guidance is a particularly weak aspect of the advising program at present. This is unfortunate because the problems are quite serious in this area. Especially in the liberal arts, many students can see little or no connection between what they are studying now and what they can do later to earn a living. Others decide on and pursue a major that interests them, with no thought of the jobs they will be suited for upon graduation. Nor does the University know enough about what has been happening to its graduates. The Placement Office at Amherst has no idea of the post-graduate activities of most of the graduates. For example, the job placement, graduate school direction, or other destination of 64 percent of the 1969 B.A. recipients is unknown.[9] The University must create some systematic and accessible means for students to discuss their career interests and to get some good advice on how to relate their educational program to this. Concomitantly, the Placement Offices on both campuses must be greatly strengthened, particularly since we are recommending a greater career orientation to the undergraduate educational process.

The increase in older students which we recommend will create a special advising and counseling need. Their academic interests are likely to be more specific in career or vocational terms, and their knowledge of university resources and course offerings is likely to be less secure than that of present undergraduates. An integral and inescapable part of any serious effort to accommodate older students will be a substantial counseling and advising service—one that gives special attention to the problems of older students.

The substantial increase in the number of low-income students we recommend will also increase the need for advising. If the University's present experience with "disadvantaged" students is any indication, the counseling and advising services these students need to make a satisfactory adjustment to University life are considerable.

In contrast to the weaknesses in academic advising, the personal counseling services available at Amherst, including mental health and psychiatric services, seem to be in salutary condition. The forthcoming reorganization of Human Services should improve them still further. In Boston, on the other hand, personal counseling services seem weak. While immediate improvements are needed, the longer-range solution will have to be worked out in the context of a newly designed health-mental health service at Columbia Point.

9. **Annual Report, Placement and Financial Aid Services, UMA, June, 1970, Appendix—Report on the Class of 1969.**

New Incentives and Rewards for Teaching and Public Service. The University of Massachusetts compares well with similar public universities in the commitment of its faculty to good teaching. Nonetheless, we believe that structural change is essential if teaching, especially of undergraduates, is to achieve the general level of excellence it deserves. The success of our proposed freshman year experiment, of the problem-oriented learning units, of residential colleges and of independent study programs depends on individual faculty members knowing that advancement and tenure can flow from effective teaching and important contributions to these new undergraduate teaching endeavors.

The present barriers to a pluralism of standards and rewards for faculty are part of a national pattern. The "national public" to whom a faculty member directs his research, publication and professional society activities is in general his professional colleagues. The same public is the primary source of the reputation of the department, and that reputation is based on the publications and research of its members and on the overall level and quality of its research grants and facilities.

Under those circumstances the genuine interest of the faculty in effective and innovative undergraduate instruction tends to be overridden by a reward structure that is well beyond the reach of any individual faculty member or even department to change. In the absence of strong alternatives supported by the University, academic professionalism has a kind of self-perpetuating inertia: it is what professors and departments will do as long as the University does not forcefully say what else they should be doing.

The Committee feels strongly that the University must work for the deliberate creation of a "teaching ethos" within the University as a whole.

The traditional criteria in American universities for salary, promotion, and tenure have heavily emphasized research and publication. For example, the survey of the Amherst faculty taken by the Committee revealed that 62 percent of those responding agreed at least somewhat with the statement that "Promotions and tenure are based primarily on research and publication, and teaching is insufficiently rewarded."[10]

We believe that if teaching and public service are to be encouraged effectively, the present incentive system for faculty will have to be modified. We therefore recommend that the University undertake a study to develop a new set of standards for tenure, pay, and promotion which make it explicit that a

10. More exactly, out of 647 replies, 35 percent agreed; 27 percent agreed somewhat; 11 percent were neutral; 12 percent disagreed somewhat; 13 percent disagreed; and 2 percent did not respond or gave inapplicable answers.

faculty member may make his or her primary contribution to the University in one of the three areas of research and publication, public service, or effective undergraduate instruction and curriculum improvement, with competence to be shown in the other two areas as well.

Present standards recognize that a good faculty member should have a multiplicity of competence. A person cannot teach effectively or serve the outside public well if he or she is intellectually dormant and does no research. Public service may improve the quality of one's teaching or research. But we think the reward system should more explicitly encourage those whose chief contribution will be in teaching or public service.

Some corresponding changes in the sources of information and influence bearing upon tenure and promotion will have to be made, too. For example, systematic approaches to the evaluation of teaching need to be developed. The Amherst campus has had a faculty-student committee at work on teacher evaluation since last January, and we hope the results of that report, recently released, will receive careful consideration on the campus. A similar study should be undertaken at Boston.

Departmental excellence in teaching, and, for that matter public service, curriculum innovation, and advising should be rewarded, too. The administration has at its disposal the allocation of new faculty positions, general budgetary support, and teaching assistantships, to be used to these ends.

The administration at Amherst has begun to move to encourage the departments to build into their evaluations of their members an increased emphasis on teaching and a heightened recognition of activities in residential colleges, international programs, honors, the Bachelors Degree in Individual Concentration and advising and counseling. They have made it clear that they will look favorably for individual merit increase purposes and departmental reward purposes on activities in these areas. From a programmatic point of view, the various special academic programs have been given new visibility by the recent appointment of an Associate Provost for Special Programs.

Beyond the reward system and associated evaluative efforts, there are other steps that can and should be taken to improve teaching. The Provost's office might combine the professional administration of a teaching evaluation system with use of videotape to allow faculty members to observe themselves and perhaps others, organization of seminars and workshops on teaching, encouragement of team teaching, and maintenance of a library of materials on college teaching.

In all of this we have said nothing about tenure itself, pre-

ferring to concentrate on what the standards for reward are to be rather than on the nature of the reward itself. Nonetheless, we would be derelict if we did not record our awareness of the controversy now developing around the country regarding the tenure system.

A tenure system has positive advantages. It provides a fixed point in time where an extremely careful evaluation of a faculty member's qualifications can be made. Once granted, it serves to protect those who are often the most effective critics of society.

Nonetheless, resource scarcity and concomitant slowing of university growth nationally mean that tenure decisions will be made far more selectively in the future. In these circumstances it might be advantageous from a number of viewpoints if a method could be developed whereby judgments can be made about a faculty member's continuing intellectual vitality and professional competence at a number of points in his or her career.

It is, however, difficult for one institution to change the rewards it offers in the absence of change elsewhere. We therefore urge the University to take the lead in getting a regional, or, better still, a national study of this issue under way. With resource problems what they are, leadership is likely to be taken outside of universities on issues of this kind if the institutions themselves do not take the initiative to examine their situation.

The University Professoriate. We believe attention to undergraduate teaching would also be facilitated by the creation of a teaching-oriented University professoriate.

The traditional University professor is an exceptional scholar who is given an exceptional position in order to be absolutely free to advance the frontiers of knowledge. Ours is a different conception. We would reserve the University professoriate for exceptional people, too, but their freedom would be to use their creativity to help realize the University's commitment to quality undergraduate instruction. Their careers as University professors would be tied primarily to their excellence as teachers of undergraduates, although they would still be expected to demonstrate competence in research and service.

The quality of this endeavor depends ultimately on the quality of its appointments. They must be able to hold their own and more in the University community. The University professorship must find first-class people, or it will do no good at all. Thus it must not be solely a "teaching appointment." University professors should be individuals who have done, and continue to do, research of a significant character, and it is important that their skills find an outlet at the graduate as well as at the under-

graduate level. Otherwise, they will quickly find themselves regarded condescendingly as "mere generalists" by the department faculty. University professors should, therefore, also have a part in the training of graduate students, particularly in explicit programs in undergraduate teaching. Similarly, they should commit their research talents to the various inter-disciplinary studies we have discussed earlier.

The effectiveness of this new professoriate also depends on its size. Unless it has a substantial membership it will have negligible leverage on the quality of undergraduate teaching at the University.

Other Staffing Issues. The University should make an active and sustained effort to recruit and hire more adjunct faculty. The concept of adjunct faculty is not unfamiliar in many parts of the University, but we think it could be more widely applied. Several of our recommended new programs, such as College III, in-service training programs for government and other service personnel, the problem-oriented learning units, and the increased emphasis on field study opportunities, require that "outsiders" be involved in the teaching process. To develop a substantial and effective adjunct faculty will require changes in hiring patterns, rank and pay structure and retention policies. Recruiting will have to be done with care, but it is clear that there are people in government and business, people dealing professionally or personally with problems like health, welfare, and the environment, who could contribute greatly to the intellectual life of the University.

Another key staffing question relates to women on the faculty. Like most universities, the University of Massachusetts has a poor record in this area. The faculty at Amherst is 14 percent female, at Boston 24 percent. There are 9 women who are full professors at Amherst (3 percent of the full professors), and 4 at Boston (9 percent of the full professors). As to associate professors, there are 38 at Amherst (12 percent) and 8 at Boston (14 percent). This record must be improved upon.

Similar efforts need to be made to recruit more minority group faculty members as well. At Amherst last year there were a total of 28 black faculty members, about 2 percent of the faculty. The total included 4 full professors and 4 associate professors. At Boston this year there are 10 black faculty members, about 3 percent of the faculty. There are 3 full professors and no associate professors.

A final staffing issue that is very important to the over-all effectiveness of faculty, and therefore to undergraduate teaching, too, is the matter of support, particularly secretarial help, in

departments. Faculty members are often seriously hampered by inadequate secretarial assistance. There simply is not enough secretarial help to go around, and the jobs that do exist are badly underpaid. A related matter is that of student research assistants. If funds were available for help of these kinds, faculty productivity might be greatly enhanced. Funds in these areas are always in short supply. We believe the University should make a concerted effort to change this situation, working for a more favorable ratio of support staff to faculty members and seeking to upgrade the salary schedule of the secretarial staff, especially those who have highly responsible administrative positions.

THE UNIVERSITY AS A HUMANE COMMUNITY

Whatever gains flow from implementation of our academic suggestions will be partially nullified if steps are not also taken to make the rest of college life more congenial.

Life in the dormitories at UMA is difficult for many students. Noise, lack of privacy, and sterility of environment, especially in the Southwest area, are endemic. The signs of dissatisfaction are clear. Students, upon reaching the age of 21 or becoming seniors, leave for apartments and other off-campus housing. Vandalism and theft, already at high levels, are on the increase. One professor who has studied student life-styles and attitudes in depth, told us of students, lost in their anonymity, who languish in their dormitories appearing seldom if ever for classes and other activities.

The Committee believes that these problems are of sufficient intensity and scope to warrant top priority on the agenda of the Amherst campus community. There are a number of changes that would make dormitory living more compatible with the educational, social, and developmental needs of students. Those which we list below are meant to be illustrative and do not exhaust the possibilities.

A beginning step in giving students a greater stake in their living environments would be greater decentralization of resources and decision-making responsibility. Many students complain that decisions about dormitory life are made for them, and money spent on their behalf, without their having had a voice. So long as authority and resources are in general centrally controlled, this will inevitably be the case. Decentralization might be pursued by appointing masters for the three areas (Central, Northeast, and

1076

Sylvan) presently without them; by allocating necessary support staff to the five areas; by the Vice-Chancellor delegating appropriate resources and responsibilities to the Masters; and by the Masters delegating appropriate responsibilities and resources to the governing bodies of the individual dormitories.

A second step would be an increase in the number of living-learning opportunities. Both the Southwest and Orchard Hill residential colleges have already made commendable progress in the development of courses in response to student needs. In addition to the offering of some 300 sections of "core" courses and 75 honors colloquia, the two areas are presently offering some 30 special problems and seminar courses covering such areas as the "Exploration of Radical Psychologists," "An Interdisciplinary Approach to Aesthetics," and "American Life 1865-1900."

The quality of life in the dormitories would be enriched by the incorporation of more classes into the dormitory setting. Some classes might be sections of large enrollment classes in the University and others might be student initiated "390" courses and honors colloquia. The major purpose of the dormitory classes would be to bring students in the dormitory together around given areas of intellectual interest. Among other things, this will necessitate the allocation to each Master's budget of more slots for hiring full-time and part-time (both released time for regular faculty and adjunct faculty) faculty for dormitory-based courses.

A third aspect would be steps to encourage dormitory identity and diversity. The Committee feels that dormitory life would be enriched if, instead of a relatively homogeneous collection of buildings distinguished only by relative physical attractiveness and location, dormitories could begin to develop individual identities around any number of a broad range of possibilities. There might be, for example, special interest dormitories along various intellectual lines. Some dormitories might be single sex, others coeducational. Others might be cooperative houses with students doing all their own cooking, maintenance, housekeeping, and security.

A fourth step would be expansion of the age range in dormitories. By living in age-segregated circumstances, students miss the opportunity, at a significant time of their growth, to interact with people of different ages and different experiences. We believe the dormitories should try to make space available and attractive to graduate students, older students, faculty, staff, and other members of the community in an effort to broaden the age range of the dormitory population.

A fifth step would be student rearrangement of dormitory space. Dormitories all over the country are battlegrounds between

student desires to express their identity through remodeling their living space and institutional desires to keep buildings neat, clean, orderly, and as originally designed.

By virtue of their concrete construction, UMass dormitories are difficult and expensive to alter in any significant way. But we support student desires to be able to affect their own living space, and design it to fit their needs and express their individuality. We therefore propose that part of the budget for the dormitories be made available for reasonable alteration and improvements in living space as approved by dormitory governing councils.

A sixth and final step would be student involvement in dormitory maintenance. We encourage governing councils to investigate the possibility of students in the dormitory taking on many of the maintenance functions. Such efforts might be recompensed either by an increase in discretionary money available to the dormitory or by a reduction of room charges for those in the dormitory.

If dormitory problems generally are the "living environment" issues at Amherst, the problem at Boston is how to build any sense of community on a commuter campus.[11] Earlier we discussed limiting housing as a partial solution of this problem. Beyond this, however, there are a variety of possibilities which we urge the planners of the Columbia Point campus to explore fully.

The simplest, although very important, are matters like the design and hours of the library, the cafeteria and snack bar facilities, the student union facilities, recreation facilities, open spaces, and so on—many of which have already been taken into account in the planning up to now.

More complicated is the possibility of encouraging or facilitating the development of an arcade or group of commercial establishments which cater to students and other University people, and are congenial to the University's neighbors as well. The location at Columbia Point and applicable law regarding mixed use of public buildings make this difficult to do, but it must be exhaustively explored because such a mixture of newsstands, dry cleaners, clothing stores, pubs, restaurants, drug stores, and so on will make a great difference in determining whether there will ever be any student life at Columbia Point, or whether the campus will just be a group of massive, impersonal buildings where people sit in classes, use the library occasionally, visit the cafeteria when necessary, and leave.

11. Our survey of the Boston students revealed that 66 percent of the respondents participate in no student activities.

GRADUATE TEACHING AND RESEARCH ACTIVITIES

Graduate teaching and the work of research and scholarship are part of what defines a university. They are also supportive of and essential to an undergraduate focus in a number of ways.

To begin with, research activity contributes to good teaching because it can help the teacher keep his or her mind fresh and alive to new ideas and problems.

A good faculty member is one whose competence extends across the board of teaching, research, and service. He or she may concentrate primarily in one of the three, but it should be relatively rare to find a person so uniquely competent in one of the three areas that he or she is not expected to do anything in the other two. As was indicated earlier, the reward system for faculty should be modified to reflect not only the balance we describe, but also the free choice of primary concentration on one or another of the three functions.

If good teaching and good research are mutually supportive in general, this does not mean they are as mutually supportive in practice as they might be. There are a variety of ways in which the research activities of the University might be made more supportive of undergraduate teaching.

First, there is at least a tendency to assume that teaching and research activities must be carried on simultaneously. Studies of faculty attitudes show a clear tension caused by the need to prepare for class and complete scholarly work at the same time. Scholarly work suffers and students suffer, too. The sabbatical policy of the University is fairly rigid, allowing the traditional year off in seven (with half pay, or half year off with full pay). It would be helpful to faculty self-development and research if sabbatical time could be taken in smaller units more frequently.

Apart from sabbatical policy, it would also be useful if arrangements alternating more intensive teaching with time off for research (or service) could be developed. A faculty member might, for example, teach twelve hours one semester or year and an appropriately reduced amount the next semester or year. Other time-off incentives could be created, too—e.g., a semester free for every three years of living in a dormitory.

Second, it should be possible to involve students in the research process. Course work could involve students in the process of watching and participating in the initial stages of formulating researchable problems. So often the lecture, like the article or book, is a finished product where the student sees only the end result, without the many false starts and mistaken assumptions—

i.e., without the process of thinking that went into it. Involving students in the research process might assist that process and contribute to undergraduate teaching at the same time.

Graduate programs in the arts and sciences also bear redesign to support undergraduate teaching to a greater degree than they do now.

Some budgetary facts of life are a good place to start on this issue. The impressive growth in the number and stature of the graduate programs at Amherst has been accomplished in part by re-allocating resources from the area of undergraduate study. Administrators at Amherst candidly admit this was the only avenue to strong graduate programs in the University, since the legislature would not explicitly allocate resources to finance the inevitably more expensive graduate programs.

It is easier to report what has happened than to say what should be done about it. In a perfect world, all worthwhile programs would have enough resources and the graduate programs would therefore be adequately financed. In the world as it is, it is doubtful that such financing will be forthcoming, although every effort should be made to obtain it. Nor is it right to penalize the graduate programs for this reality. The University needs strong graduate programs, not only for their own sake, but also because the prestige of the graduate programs helps the prestige of the institution, and this in turn indisputably enhances the career and life prospects of its undergraduate students.

What should be done? The best we can say is that the graduate area is one where the University must ask itself some hard questions in the coming years. New recipients of graduate degrees are having a difficult time getting placed. While it is difficult to say what will happen in particular fields, there is every reason to believe that the over-all market for Ph.D.'s may have peaked, at least temporarily. Some of the most prestigious universities like Harvard, Berkeley, and Stanford, are cutting back on their graduate programs as a matter of priorities. The State of New York has recently placed a one-year moratorium on the establishment of new Ph.D. programs in institutions under its jurisdiction. We think the University of Massachusetts must also re-examine its distribution of resources to graduate programs in the arts and sciences.

Therefore, if excellence through growth was the by-word regarding graduate education in the sixties, excellence through selectivity should be the approach to the seventies.

How is this approach to be applied? First, UMA should be aware of the national picture and analyze, program by program, what has happened to its own recent graduate degree recipients.

A recent history of successful placement of the graduates of a particular program is certainly not irrelevant to the future. It may turn out, for example, that some departments have developed unusual placement patterns, placing people in state and community colleges or in positions outside higher education. Such success may warrant continued support even though traditional academic employment prospects in the particular field are dim.

Second, programs need to be honestly examined as to their size and academic promise.

Programs do not have to be huge to be good, and the University might do well to confine its program-strengthening efforts to those areas where there is academic promise due to the people already involved or where there is definite need, or both. If and when a strong cooperative planning effort with private universities in the State is established, decisions to limit growth in some areas and expand in others can be made on a mutually complementary basis, as we suggest in Chapter V.

Third, programs can be examined for the percentage of applicants they are admitting, to ensure they do not take virtually anyone who comes along in order to justify their budget requests. A program which takes more than fifty percent of its applicants is not very selective, and a far smaller acceptance ratio would suggest a greater concern with quality.

Fourth, the consequence of the first three—is the degree of care exercised in the assignment of faculty positions. UMA has been making a commendable effort to channel a major share of new positions to areas on the campus which are growing rapidly, like psychology, sociology, and the School of Education, although of course popularity with students is by no means the only basis for increased support. Over-all, however, not enough of an effort is being made as yet to use the allocation of positions as a means to slow growth of areas which should not be growing.

These steps will ease the budgetary strains between the graduate and undergraduate areas. There are also steps which would affirmatively strengthen the relationship.

The performance of graduate teaching assistants is a key factor in undergraduate teaching. This past year the graduate school introduced a Teacher Improvement Program to work with teaching assistants on upgrading their teaching abilities. A number of departments have taken similar actions. We commend these steps and urge that they be expanded.

Indeed, the University would be well served if its graduate programs in the arts and sciences became known for the teaching ability of their graduates. This is an area where the University could exercise national leadership to a number of ends. For one,

105 81

colleges and universities all over the country are likely to be considering and adopting new teaching departures like those we have suggested, whether a new freshman year, a problem-oriented learning program or whatever. They will need new faculty who are attuned to such programs. More broadly, the fact is that college and university teachers have rarely been specifically trained to teach. In a period when undergraduate instruction is receiving new attention all over the country, a university which truly teaches teaching has a great contribution to make. This path could be pursued by increasing the emphasis on teaching in the Ph.D. programs, by new degree forms like the Doctor of Arts or the Master in Philosophy, or both. We would approach new degree forms with care because of the problem of getting them accepted outside the University, but both paths are reasonable.

A related, very important issue is that of arts and sciences graduate study in Boston. The Boston campus is now undergraduate-oriented, which we applaud, and we have suggested that its priority for development should be toward professional programs primarily for undergraduates. Nonetheless, we believe the undergraduate orientation would be strengthened if master's programs in the arts and sciences were introduced on a careful and limited basis at Boston. It would be logistically helpful to undergraduate teaching and to research to have teaching assistants on the scene. And it would be desirable to provide graduate study opportunities that are physically accessible to Boston people, especially lower-income people. Thus, where a master's program in the arts and sciences can be designed innovatively and related to community need, its establishment on a small scale should be regarded as appropriate.

We would stress, however, that it should be unnecessary to establish any Ph.D. programs at Boston for the foreseeable future. These programs are far more expensive than the master's programs, and would take more resources from the undergraduate area without creating enough additional benefits to undergraduates to make the cost worth paying. The Boston campus can earn distinction without offering the Ph.D. Indeed, not moving toward the Ph.D. may be the only way the University at Boston can be sure it will have enough resources to pursue a distinctive path.

PROFESSIONAL EDUCATION

More professional education at both the undergraduate and the graduate level is necessary to respond both to student interests and to what we see as society's needs for the future. At Amherst now, nearly one half the undergraduates take a professional curriculum in Agriculture, Business Administration, Education, Engineering, Home Economics, Nursing, Physical Education and Public Health. In the future we will need additional professional programs, both undergraduate and graduate, because there are new things to know and understand that require the combination of operating skill and liberal arts perspective which a university is so well suited to give. We believe the seventies will demand more professionally trained people than ever before, and the University's curriculum should reflect that.

A key issue for professional programs in the seventies is how to offer both practical competence and the values traditionally associated with the liberal arts. Undergraduate professional programs at UMA have tended to be somewhat more satisfactory in this regard than those of other institutions, because of the ease with which students can take courses throughout the campus. Nonetheless, the professional schools need to examine their curricula on this account and change accordingly.

They need to ask themselves whether their program is teaching students to be self-critical of the particular profession and conscious of the social impact of its activities. They need to see whether what they are teaching is what needs to be learned in 1971. They need to ask whether their public service program is responsive enough to the needs of the Commonwealth.

Of course many of the academic reforms we suggested above will help in creating the needed breadth: an appropriately adapted freshman year program, field work in courses, cross-disciplinary work, and so on. But beyond these specific changes, the broader imperative is the infusion of all professional education with the values and ideas of the citizen-professional, the practitioner with human and social sensitivity complemented by a high order of professional skill.

Most new professional programs established in the coming years should be at Boston, although of course new programs will undoubtedly come along in the existing professional schools at Amherst. But Amherst's growth should be slowing and then stopping, and there simply is not room for very many large new entities. One possible exception to this would be a law school, the establishment of which we support, but which is being considered by a companion committee to ours, chaired by the

Attorney General of the Commonwealth.

A second new professional program which should be established is College III at Boston, which we have already discussed.

Beyond College III at Boston, we recommend that the Boston master plan's contemplation of six colleges be re-examined in light of our suggestions for a greater proportion of professional programs at Boston. While we fully endorse the idea of subdividing UMB into more manageable, more personal college-sized units, we think each new college at Boston should be different in its emphasis from the others, with most of them problem-oriented or professionally-oriented in approach. If that is done, we see no reason to limit the number to six, or, for that matter, to assume that each will be as large as 2,500 students. The total number could be as many as student demand, community needs, and available resources suggest. There might be 10 or 12, ultimately. Each "college" building at Columbia Point could house 2 or 3 or even 4 colleges, depending on their size.

Colleges I and II should retain their liberal arts emphasis. Newly formed colleges should move toward greater involvement in the city and increased emphasis on professional and career-oriented training.

Our vision is that as College III develops undergraduate programs in disparate fields—whether in health, housing, manpower, prison administration or mental retardation—it will become clear which of these areas generate a placement and student demand large enough to be the focus of additional separate colleges. A prison administration program could be the basis of an undergraduate College of Justice. A health program could lead to a College of Health Services. A mental retardation program could lead to a College of Human Development Services. At some point, it may also make sense to have a college devoted to media and communications, and possibly also colleges of business administration, library science, and computer technology, among others.[12]

Worcester presents a great opportunity for development of new programs in the health professions. We believe Worcester should be developed as a full health science complex, including a variety of options for undergraduates. At a minimum this should include as full as practicable a range of career opportunities in the health services, which are in total the third largest employer in America and one of the fastest growing. These

12. To the extent that student attitudes are helpful in determining academic directions, our survey showed the following percentages of the respondents favoring career training in various areas: teaching, 37%; social work, 34%; law, 32%; journalism, 31%; urban planning and administration, 29%; health careers, 22%; business, 18%. Only 5 percent said there should be no career training offered that is not now offered. In response to another question, 68 percent said they want M.A. programs, 45 percent want professional graduate programs, and 40 percent would like to see Ph.D. programs.

could include various kinds of technical health professions, physicians' associates and assistants, physical therapists, mental health personnel, health policy planners, health insurance experts, hospital and nursing home administrators, biomedical engineers, and so on.

A caveat here is that the University should not get into the business of training those allied health personnel who are more appropriately the clientele of the community colleges. Instead, it should strive to develop a workable differentiation of mission and cooperation among the various programs, accepting community college graduates who want to continue their health training in the University. An example: graduates of nursing programs in the community colleges now find it difficult to transfer into baccalaureate programs because many four-year institutions will not give credit for the nursing portion of their community college training. The University could take initiatives to change this situation.

The health curriculum should be flexibly constructed along career ladder lines so that community college graduates can continue in the University, or, more broadly, so that a nurse or technician who wants to become a physician, or a para-professional who wants to become a nurse or technician, does not have to start all over at the beginning, but can get credit for experience and previous training and go on from there.

The starting of a new medical school represents an enormous opportunity to open up medical education, to look at it as beginning right after high school, and as a continuum on which present time lines are arbitrary. The entrance into health care education should be a broad door, and it should have exit gates at many points along the way, plateaus of intellectual and professional achievement from which people can come back in later on for further training if they wish. The Medical School itself should allow earlier entry, and be more flexible in its time frame, too.

For the existing professional schools at Amherst our comments are subsumed primarily in the general observations at the beginning of this section, and of course the bulk of our academic recommendations are as applicable to the professional schools as they are to the arts and sciences.

Nonetheless, some specific comments are in order. In addition to re-examining their professional programs, schools like Engineering and Business Administration can constructively broaden their teaching roles in the seventies to make literacy in technology and business issues more available to the broad range of undergraduates. Properly taught, such courses could make a great contribution to the citizenship and career education of students who will

109

not be dealing directly or primarily with problems of technology or business in their professional careers.

These schools and others in the professional area can readily experiment with many of the concepts and recommendations we advance for consideration and trial. Applied research cutting across disciplinary lines is already an established educational approach in programs like Business Administration. And a number of the professional schools were deeply involved in creating the Institute on Man and His Environment.

Other collaborative programs of teaching and research have developed via such centers as the Water Resources Research Center and the Labor Relations Research Center, involving faculty and students from professional schools and the College of Arts and Sciences in a variety of multi- and interdisciplinary problems. New teaching and research thrusts spanning the Life Sciences and Engineering areas (sometimes called Bio-engineering) have already begun in the form of cooperative efforts between Engineering and Agriculture in the field of aquaculture—the growth of food in fresh and salt water; between Engineering and Physical Education in problems in human motion; between Engineering, Nursing, and the Social Sciences in the area of improvement of health care delivery systems; between Engineering and Psychology in the area of biological control systems; and between several schools and colleges in Marine Science and Engineering. And a current proposal for teaching and research in Pollution-Free Energy Sources has been developed by a team effort of faculty from eight departments spanning Engineering and the School of Business Administration.

The Department of Public Health has strengths which reflect a number of our recommendations. We have stressed professional education for undergraduates, and the department has a highly regarded undergraduate program, which offers career options in environmental health, community health education and medical technology. It is one of the few public health schools with an undergraduate program at a time when more and more schools are seeing the value of offering public health career opportunities to undergraduates. We have stressed the need for interdisciplinary learning, and for a liberal arts connection in professional programs. The department has strong ties in both its graduate and undergraduate programs with a wide range of departments in the social and natural sciences, and with all of the other professional schools.

The programs within the professional schools thus present a range. Some are still quite traditional, and some are very innova-

tive. We urge all of these schools to engage in a process of continuing self-study to ensure their relevance to the seventies.

One particularly pressing question is the future of the College of Agriculture. As the farming population of the State has declined, the college has sought to redefine its academic mission to cover broader issues relating to land, water, and natural resources. But the University has essentially avoided the issue of Agriculture's ultimate role for nearly a decade, constraining it to operate under a virtual "no-expansion" policy but not making any basic decisions for the future.

Despite this, the College has made an effort to keep up with the times; for example, three of its eleven departments are relatively new efforts in environmental sciences, landscape architecture (including urban and regional planning), and hotel, restaurant, and travel administration. Many of the older departments have moved in new directions, too. Agriculture and Food Economics has people who are deeply interested in community development and economic planning. And Food Science and Technology has developed an extensive network of relationships with the whole food processing industry.

We think there are three possible future directions which are sensible, all of which would build upon activity now going on.

One would be for the College to concentrate on issues of nonfarm rural development, including the difficult land-use questions that develop when urban and suburban life moves out into previously rural areas. A second would be greater effort on consumer problems—matters of nutrition, patterns of food buying, and home economics. This would involve cooperation with, or even merger with, the School of Home Economics. These activities would get the College of Agriculture involved with urban issues and people in the kind of limited, defined way that could yield useful results. The third would be to find ways to extend the College's industrial and economic development activities to a range of industries beyond food processing. Food Science and Technology, for example, could look into and teach about the processing and marketing problems of fishermen, and perhaps assist the industry in the organization of marketing cooperatives and the development of new processing technology.

Service to the Commonwealth...

SUMMARY OF MAJOR RECOMMENDATIONS

- The University should develop a coherent public service policy, including efforts to ensure that public service activities serve a University purpose as well as a public purpose, a priority on faculty and student involvement in carrying out public service activities, and efforts to secure funds for support of service to groups which cannot afford to pay.
- The University should establish permanent, high level staff in the President's Office and on the campuses to be responsible for coordinating public service activity and implementing the University's policy aims.
- Priority attention should be devoted to service activities relating to the University's immediate neighbors, especially those of Columbia Point, Dorchester, Savin Hill, and South Boston, and also to services assisting governments, the poor, health care, education, and economic conversion.

Having examined the academic side of the University, we turn now to its public service role. Public service as we define it includes three major areas:

-- advice, information, and technical assistance to business, government, neighborhood groups, and individuals on problems which the University has competence to assist in solving;

-- research toward the solution of public policy problems, whether by individual or groups of faculty members or by the formal institutes and centers of the University;

-- conferences, institutes, seminars, workshops, short courses and other non-degree-oriented upgrading and training for government officials, social service personnel, various professional people, business executives, and so on.[1]

1. We might well have organized our analysis differently. Degree-oriented programs for older students are closely enough related to non-degree-oriented programs that the two could have been considered together in this chapter. Certainly the two have traditionally been handled together or similarly in most universities, usually in ways external to the regular academic program. We have separated the two in order to emphasize our belief that degree-oriented programs should as much as possible be a part of the regular academic process of the University, and that credit for work by older students should be offered more widely than it is now, especially to people for whom a credential is economically important. Moreover, discussing non-degree-oriented work—"continuing education" is another term for it—in a public service context underscores our belief that much of it will benefit the agency or corporate employer as it benefits the individual employee.

Consideration of the public service role must begin with a statement of caution. Not only is the institution a university rather than another kind of higher education facility; it is a university rather than a community action agency, a housing authority, or a pollution abatement agency. Its service activities must be related to its missions of instruction and research. And the kind of service a university can deliver is limited by the competence of its personnel, the funds available for the task, and the other demands on the energy of the institution and its personnel.

Nonetheless, we would emphasize that the University must do far more in the area of public service to the Commonwealth and its citizens in the seventies than it has done in the past. Doing so is not only an added dividend for the taxpayers who support the institution; it is of great importance to the academic processes of the school. It will be of direct value to students insofar as they can learn through participation in public service activities, and of indirect value to them insofar as it helps faculty members to add the breadth that comes from coupling conceptual and analytical mastery of an issue with firsthand appreciation of the problems involved in resolving it.

It is the purpose of this chapter to suggest some areas of emphasis for service, to delineate some possible criteria by which to judge the propriety of particular service tasks, and to indicate some organizational directions which might be helpful in fulfilling the public service responsibility.

THE PRESENT SERVICE CAPABILITY OF THE UNIVERSITY

The University's present involvement in service programs is characterized by absence of central management, responsiveness to ad hoc demands, unevenness in emphasis, and a good deal of constructive and useful accomplishment.

The largest single organized service activity of the University is agriculturally based—the Cooperative Extension Service. The range of its activities is impressive: stretching from neighborhood park development, nutrition programs and 4-H clubs in urban areas to dairy cattle breeding, cranberry crop improvement, farm building design, and pesticide and herbicide testing in rural areas. While it has some capability and desire to expand its programs in urban areas, its activities are still for the most part rurally-oriented.

Since the turn of the century, extension agents have done a commendable job in being "the farmer's man." Now the question

is how to get these kinds of resources applied to other needs. One may wonder, for instance, if the shoe industry in Massachusetts would be so near total extinction if the University had been able to spend as much technical aid, research and skilled manpower on it as it has, say, on the dairy cattle industry.

It is hard to get a clear picture of the University's other service activities. Indeed, this is the critical problem; the lack of central management makes it impossible to know what the overall and cumulative impact of the University's activities are, let alone control or shape them.

Some of the major activities are carried out by the various centers and institutes which have sprung up on the Amherst campus, usually in response to the initiative of some faculty member or stimulated by the availability of some federal or foundation grant. To list a few: the Center for Economic and Business Research and the School of Business Administration are involved in regional planning in the lower Pioneer Valley; the Labor Research Center has provided numerous short courses on labor-related problems; the Water Resources Center is doing useful work in water pollution abatement; crop research has been done in Africa by the Center for International Agricultural Studies. The School of Education is the home for a large range of experimental programs scattered from Chatham, Massachusetts to Dade County, Florida, and from Brooklyn, New York, to Ulster, Northern Ireland. They include projects testing out education technologies and hardware, working with the children of the poor, training teacher aides and administrators, and offering basic education to adults.

The Boston campus has far less in the way of service activities. Its only entity organized especially for service is the Institute for Learning and Teaching, which is committed to improving instructional capabilities in metropolitan Boston schools in areas like bilingual education. Some of the Boston faculty have been working with the Model Cities College in Boston, others have been participating in exploratory discussions with community residents at Columbia Point, and the library at UMB is sponsoring two courses for inner-city volunteer library aides.

In addition to these identifiable efforts, there are, of course, a vast, uncountable and, with present knowledge, unknowable number of activities carried on by individual faculty members. Indeed, if they could be somehow identified and summed, they would probably outweigh anything else the University is doing in the service area.

Superimposed upon a portion of these uncoordinated activities is, at Amherst, the Division of Continuing Education, which ad-

ministers a modest program of evening credit courses for adults, and a conference center that runs an array of workshops, conferences, seminars, short courses and the like. The center has been in operation only a little over a year, but even in this time, it has provided services for tens of thousands of people. For a good portion of these programs, the center provides no more, in effect, than hotel and conference facilities. For others, however, it provides various planning and educational services. For example, the center has designed a course in nursing-home administration which it offers on a more or less regular basis. The Boston campus is in the process of considering plans for continuing education as we are writing this report.

A POLICY FOR PUBLIC SERVICE ACTIVITIES

The first conclusion to be drawn from the present lack of over-all coordination and direction within the University is that it needs to develop a policy to govern its service activities, and an organization to effectuate that policy and manage the service program.

Prerequisite to development of such a policy are at least three kinds of knowledge: knowledge of what the University is doing now; knowledge of what other institutions are doing; and knowledge about the needs and potential demands for service in the Commonwealth.

There is at present no statewide, continuing compilation that we could locate of either existing activities or future needs.[2] So far as we know, there is no organization with the present knowledge or capability to make manpower and economic projections for the State. Before the University can intelligently decide in full what directions it should pursue, it will need to know much more about what is going on now, and what is needed for the future.

The first indication of commitment to a new policy and an invigorated program would be the creation of permanent, high level staffing for public service both in the Office of the President and on the campuses. Amherst has been trying to get funds from the legislature for permanent continuing education staff at least since 1967. At present it has two staff who are funded with appropriated funds, neither in permanent positions, and about ten

2. Information on current opportunities for individual adult study in the Boston area, both credit and non-credit, is available in an annual compilation published by the Educational Exchange of Greater Boston. See, e.g., Educational Opportunities of Greater Boston for Adults, Catalogue No. 48, 1970-71 (The Educational Exchange of Greater Boston, Cambridge, 1970). In addition, a study of state needs for individual adult study in the seventies was done recently for the Massachusetts Advisory Council on Education. Melvin R. Levin and Joseph S. Slavet, Continuing Education (D.C. Heath and Company, Lexington, Mass. 1970.)

more paid for by the "profits" of the conference center's operations. Boston is trying to fill one non-permanent position in continuing education.

These efforts are constructive, but we think they reflect too narrow a perspective. Continuing education — the whole mix of non-degree-oriented conferences, short courses, seminars and so on — is closely related in its role to other forms of assistance to governments and businesses. If one government wants assistance with water resource planning, then the University may send people out to help. But if many governments request such aid, or the University determines on its own that a number of communities could benefit from advice in water resource planning, then the solution might be a course or conference on the campus. The problems are related, the clientele are related, and the personnel of the University who would be involved are likely to be the same.

It seems to us, therefore, that over and above continuing education personnel, the University and its campuses should have people at the highest levels responsible for coordinating all kinds of public service, including the continuing education effort. As we have said, service activities are scattered all over the University: in academic departments, special centers and institutes, graduate and professional schools, and the Division of Continuing Education. A budgetary, management and information system to help the University be sure that what is going on is what is supposed to be going on requires high level staff in charge.

This staff would have a variety of responsibilities, all to the end of bringing coherence, both internal and external, to the University's public service activities. It would assist the President and Chancellors in exercising budgetary control over funds expended on public service. It would help schools, departments, centers, institutes, and so on, in allocating the time and overhead they spend on public service so that comparisons can be made of the cost and benefit of the various public service programs. We think, by the way, that the Cooperative Extension Service is among the disparate parts of the University which should be brought into this kind of organizational pattern.

The public service staff would be engaged in a constant process of identifying faculty who could engage in constructive and productive public service. Sometimes, however, clear service needs will go unsatisfied for lack of competence within the University. The service staff should be able to influence hiring to fill such gaps, including faculty who are not in the traditional mold. More broadly, if the University is serious about its public service activities, it must take the special talents required for service into

account in hiring and in the over-all faculty-personnel policies of the University.

In cooperation with the Office of the Provost, another critically important responsibility of public service staff should be to create as many opportunities as possible for students to participate in public service. We cannot stress too strongly the importance of this point. It is a key way to give students problem-solving experience and weave public service activities more fully into the life of the University at the same time.

On the external side, the public service administrators would help do the work that would match community needs, University strengths and funding sources. They should be watchful for new opportunities for appropriate service, for we think the University can serve a community much wider than its traditional clientele.

Along with creation of a new organization, and beyond the policy of involving students and faculty more effectively in service activities, the University will have to establish general policies and standards for its continuing education and other public service activities.

Let us turn first to continuing education. The conference center at Amherst has generated great interest in its first year of operation. It is by nature a rather ad hoc operation since one of its main functions is to be responsive to the often sporadic interests of some business or professional group for a workshop site or planning help. But, now that it is well launched, we believe it should be strengthened with permanent staff so that it can seek out clients and run a more purposeful and directed effort. We see no need to establish similar conference centers in Boston and Worcester, but, as we shall explore in greater detail below, we believe both Boston and Worcester should be developing continuing education programs as part of their public service activities.

The continuing education programs on all campuses should develop extensive ties with government agencies, professional organizations, neighborhood groups and labor unions, and become familiar enough with their needs to be able to initiate and develop conferences, workshops, and other activities. The cooperation of the academic departments and professional schools will be necessary in identifying and carrying out such programs. The staff we proposed above should have the responsibility of ensuring that cooperation. Continuing education activities should have a sufficient enough budget so they can serve agencies and organizations which cannot afford them as well as those which can.

We see little need for the University to extend its continuing education programs into primarily avocational areas, or into training for basic technical skills, and a general policy discouraging

such programs should be established. The smorgasbord offered by proprietary technical schools in Massachusetts for everyone from keypunch operators to TV repairmen, and the feast at private institutions, with courses from macrame' to Hindi, suggest that there is little need for the University to extend itself into these areas. Leisure-oriented education will be very important in the coming years, but we believe the University should leave it to others who are already doing it unless study shows their activities are inadequate. This should not, of course, preclude the University from offering its facilities and instructors in areas like the arts or physical education to the enrichment of the neighborhoods in which it is located.

Defining the rest of the public service and related research agenda is more difficult. The needs of state and local government, for example, for information, advice and knowledge are very broad. How is the University to put sensible limits on its involvement with public policy?

As Clark Kerr pointed out, many of the evils of the multiversity grew out of a kind of academic opportunism. Universities went after money no matter what it led them into doing. The result was dilution of scholarly values, including diminution of the commitment to undergraduate teaching. At the same time, we do not agree with those who would cure the problem by defining the obligation of universities solely in terms of the creation of knowledge, leaving its application to others.[3]

To maintain a middle course, we believe the University should seek to establish a standard which judges public service research activities by whether they serve both a public and a University purpose. By University purpose we mean the creation of new knowledge or the innovative application of existing knowledge, or perhaps a useful effect in aiding faculty development or enriching the academic work of students. The opportunities to do "good works" that fail to meet a University purpose will no doubt be many and tempting. The University must either resist them, or find ways to turn them to some educational benefit.

It will be a difficult task to evolve and apply the proper standard. The challenge is a dual one: to encourage more research that meets pressing public needs, and to bring more intellectual substance to some of the service entities now attached to the University.

As with continuing education, some of this activity will have to involve expenditure of University funds. Where conditions are worst and most in need of support from a public university, the University has to be willing to "go in" on its own resources

3. See, e.g., Robert Nisbet, The Degradation of the Academic Dogma (San Francisco, 1971).

or risk not being able to go in at all.

More broadly, the University has achieved a size and stature that enable it to engage in appropriate public service throughout the Commonwealth, but it has thus far neither defined an agenda for action nor devised any systematic means to fulfill such an agenda. Now is the time to remedy this. Leadership at all levels should be exerted toward focusing the attention of the relevant faculty and students on the major public policy issues in the Commonwealth, and urging that they direct more of their research toward study and solution. At the same time, however, the on-going basic research activities of the University are of continuing importance in developing the new knowledge that will ultimately be the backbone of future service-oriented activity.

PRIORITY AREAS FOR UNIVERSITY PUBLIC SERVICE

While the University must know more about State needs before it can develop an over-all coherence for its public service activities, there are at least six areas where the need is clear enough that the University can act now to place itself in a better position to respond to requests for service: the special obligation of the University to its neighbors; government service; service to the poor; health; education; and manpower and economic conversion.

The Special Obligation of the University to its Neighbors. We have spoken in general terms about the University's obligation to public service. When it comes to the immediate communities, the immediate neighborhoods in which the University operates, it has a special obligation. At the very least, that obligation is to see that it has no deleterious effects on the surrounding areas. More properly, the obligation is an affirmative one, to be a good neighbor, to help as far as it can within the limits of its talents and resources in improving the quality of life in its environs.

There is likely to be some confusion in understanding as between this immediate impact responsibility and the responsibility of the University to extend the scope and reach of its service to the borders of the Commonwealth. For example, those who live in Columbia Point, and some who are involved in planning the Columbia Point campus, sometimes tend understandably to forget that the Boston campus has an obligation to serve throughout the Boston area. Yet, it is also true that it has an obligation to serve more intensively and more sensitively in the Columbia Point-

Dorchester area. The tension is always there; the balance must always be preserved.

Boston. It is the Committee's impression, based on meetings with residents of Columbia Point and Dorchester, that the University has not up to now sufficiently involved the residents of these areas in its planning processes. There is much suspicion and mistrust, and people feel they are not being consulted. These feelings must be overcome before the University can succeed in establishing a productive relationship.

The University has made an effort, particularly at Columbia Point. It has had staff assigned to work on a day-to-day basis at Columbia Point and it created a faculty-student committee for the purpose of engaging in ongoing discussion with Columbia Point residents. In the past few months the University has stepped up its efforts to relate to Dorchester, Savin Hill, and South Boston, and, just recently, Chancellor Broderick publicly outlined a series of constructive suggestions for future cooperation between the University and all of its neighbors. These suggestions were well received.

While we support these initiatives, we cannot help but note that the mistrust persists. Still greater effort will be necessary. Adequate high-level staff must be developed to enable policy planning in conjunction with the people of Columbia Point and Dorchester on the full range of issues of mutual concern. The neighborhoods need to know they are dealing with people who can come up with answers to their questions. They will not be convinced until the relationship is clear and direct.

There are a variety of issues that need to be worked out on a consultative basis. Indeed, the length of the agenda for discussion serves to underscore the need for development of better staff resources within the University:

-- Are there items in the architectural plans which might vary, depending on the use the neighborhood would make of the facilities?
-- Could the educational program that is going to be offered to older students be made more responsive to the people of the surrounding neighborhoods?
-- Will the University be offering services to its students and faculty, in such areas as health and day care, which could be offered to people in the surrounding areas as well?
-- Can the professional training which the University is going to offer through College III result in useful service to the neighborhood by students and faculty?
-- Are there service institutions in the area, like perhaps the Dever and McCormack Schools, which could serve their con-

stituencies more effectively if the University were somehow involved in their efforts?

-- What joint recreational facilities and open spaces can be created?
-- What employment opportunities will there be at the campus for near-by residents?
-- What assistance can the University offer to neighborhood-based economic development through its policies on the purchase of services and materials?
-- What transportation improvements of mutual benefit can be developed?

All of these matters are extremely important and must be resolved. We believe that proper and close consultation and co-operation can produce joint solutions that will constitute outstanding efforts in an area that has plagued every major urban university.

There is one issue for discussion and joint action that we want to discuss at greater length.

One of the major concerns of people in Dorchester is that students will be moving into that community, an area where housing is already scarce. Although we cannot say how many students will want to live near the campus, we are certain that there will be a fair number. Forty-two percent of the students who responded to our survey said they do not live with their parents. Seventeen percent of the respondents, including twenty-six percent of the freshman (class of 1974) respondents said they would change their residence when the University moves to Columbia Point. Even if only 500 of the initial 5,000 students at Columbia Point move to nearby locations, that will have a serious impact. It is essential that ways be found to increase the housing supply in the area.

We do not think the University has enough resources of its own to increase the housing supply, but we believe it has the obligation and the ability to assist in causing an increase in the housing supply to occur. We endorse Chancellor Broderick's recent statement that the University is willing to work with appropriate organizations, groups, and individuals in Dorchester and Savin Hill, toward either the creation of a community development corporation, or other appropriate sponsorship, to build more housing for the people of Dorchester.

We cannot stress too strongly the need for action on this problem. The task is not simple. It will be difficult to build the kind of housing that is needed without government assistance, and there are some in Dorchester who have resisted governmentally assisted housing in the past. But the consequences of inaction will be the subdivision of many units of the existing

housing supply for student residence, increased rents throughout the area because of the greater demand, and a forced exit from the neighborhood for those who cannot afford to stay. So action is needed — and soon. It takes time to build housing.

The burden of proof will be on the University on all of the issues we have listed. People who have been frequently victimized by official neglect and worse are rightly suspicious, and universities have had an all too frequent proclivity for studying the poor rather than responding to needs articulated by the people of a neighborhood. Thus the University is likely to feel it is making an adequate effort long before anyone in the community gives it credit for doing so. However, it is tangible accomplishment, not gratitude, that is at issue here, and the University can ill afford to slow its efforts on the ground that they are not appreciated.

Amherst. The Committee met with members of the Committee for Environmental Concerns from the Amherst community, and staff wrote to a number of community leaders in the area, an effort which produced a number of thoughtful and extensive responses.

Our major conclusion from that effort is that the projected 25,000 student ceiling which the Trustees have discussed for the size of the Amherst campus is, as we said in a previous chapter, if anything, too large.

The correspondence revealed a variety of ways in which the University could be a better neighbor. To begin with, there is a general feeling that the University does not consult adequately with town officials on matters like highway planning.

Then there are a number of areas where the University has expertise which it could make available to the Town of Amherst and other surrounding communities.

One is the matter of water resources for the future, where the Water Resources Center could be enormously helpful. Another is the issue of how to dispose of the sludge which is left after sewage disposal — hauling is expensive and incineration pollutes the air. The University's engineering faculty could perhaps assist here.

A third is the question of solid waste disposal, which is perhaps a more vexing pollution issue for the future than air and water pollution. The present sanitary landfill approach for the University's waste is at best an intermediate solution and we received allegations that the University's management of its present landfill is not satisfactory.

- 1005 -

A fourth, very important issue, on which the University is seeking to act, is the movement of people — public transportation vs. the automobile. If the University can succeed in getting improved bus service, it can then start charging for its parking lots and discouraging people from driving.

A final issue which will be important for the future is the whole matter of planning and everything that goes with it: zoning, housing including low-income housing, preservation of open spaces, and so on.

Our impression from our survey — and many of our respondents were University faculty as well as local leaders — is that the University should be doing much more than it is doing to alleviate the negative effects of its impact on the area around it.

Government Service. As the public university, the University of Massachusetts should be a major knowledge and training resource for state and local government in the Commonwealth. The Committee recommends two foci for this effort: in-service training programs for government personnel; and research, technical aid and problem-solving capabilities through the University's Institute for Governmental Services.

In-service training programs for state and municipal government employees are weak and scarce at the moment. There are various programs scattered around, but neither mid-career training nor pre-entry training exists on a broad enough basis.

To develop the particular areas of priority for in-service programs, the University will first have to work with interested units of state and local government to develop an inventory of their needs. Then plans will have to be made for the particular mix of conferences, workshops, short courses, and institutes suitable to each in-service program, which programs should be degree programs and which not, and how much of the program to offer on site in the agency involved and how much on campus.

Because many government agencies already have personnel who do one kind of teaching or another, it may turn out that the University's role will be to help design programs rather than to run them. The Institute for Governmental Services, which should be the main focus of the University's activities in developing in-service training programs, is already taking steps to work on these matters with the state Bureau of Personnel under the recently enacted federal Intergovernmental Personnel Act.

The Institute should also be the main focus of the University's other efforts to serve government. The Institute's services in research, technical aid, and problem-solving might include, for example, the following:

--Research as a basis for public policy, such as alternative growth models for the Massachusetts economy, indicating directions for industrial development and tax incentive policy.
--Technical aid to local government in solving specific problems, such as the preparation of a master plan for town growth.
--Consultation in program development and implementation for state agencies, working on matters such as development of standards and procedures for wetlands management.

The University already has substantial expertise in a great variety of areas relating to public policy, and indeed, already works with state and local government on many problems. The Institute for Governmental Services should not change the present pattern. It should not have specialists of its own to provide the requested services, but rather should serve a general management function in bring together governmental needs and University capabilities. The Institute should also take an aggressive role in seeing that students become involved in these activities to the maximum extent possible, as interns, in field work courses, or in their research.

Service to the Poor. Service to government agencies should ordinarily be financed by the users, that is, without support from the University's budget, although we would emphasize that there are many potential governmental clients who cannot afford to pay. Beyond this, however, there is the issue of how to respond to the requests of not just poorly financed agencies which are supposed to serve the poor, but also organizations of the poor, and the poor themselves.

In an earlier age the University took as its responsibility, through the Cooperative Extension Service, to provide the economic and human services necessary to the business success and family stability of rural Massachusetts. The question is how the University can now assume some similar measure of responsibility for the poor, both urban and rural.

The Cooperative Extension Service is in fact not an appropriate analogy. The Extension Service was and is, generally speaking, a separate aspect of the University. Its activities are, on the whole, unrelated to the academic process. The challenge of the seventies is to create public service activities that are integral to the life of a broad cross-section of the University, involving faculty and students in ways that enrich the educational process and academic life of the school generally.

Thus faculty and institutional expertise, to the extent that it exists, should be made available to the poor as part of the aca-

demic program of the University. One reason for establishing a College III of public and community service at the Boston campus is that it would be staffed with people who have skills and knowledge applicable to the needs of low-income areas. If it has a program to train housing officials, for example, its faculty and students can help with code enforcement or tenants' rights questions in the community, probably as part of the students' learning process. If it has expertise on health and welfare questions, this can be made available.

More broadly, the public service administrators of the University can channel some of the skills already there now into providing some voluntary service: the Education School people, for example, would no doubt be as willing to work with low income parents seeking to improve their schools as with the teachers and administration of those schools. There are existing skills in nutrition, home economics, public health, and small business planning and management which can be similarly applied if the effort is made to identify the needs and match the skills.

The Cooperation Extension Service itself can be redirected into urban areas to some extent, too. This is of course not by any means a new idea. It has been tried in many places, often with disappointing results. If it is going to be done, the clientele to be served, and the nature of the service to be rendered, must be identified very carefully. The needs of farmers and their families were limited and easily discernible. The urban poor have such a variety of needs that any one group, particularly one which is new to the issue, cannot try to tackle all of them and hope to be at all effective.

The University can and should make the competence it does have available to the poor. It now has, and will increasingly have in the future, faculty, staff, and students with useful expertise. That should be offered, and every possible effort should be made to obtain funds to serve the poor as well as those who can afford to pay.

Health Services. With the establishment of the Worcester campus as a going concern, the University is on the verge of developing a major new service resource to go with the current activities of the Department of Public Health at Amherst. It is important that this new expertise be focused not only on the training of M.D.'s but also on problems of community health, postgraduate institutes for health care personnel, the financing and delivery of health care services, and relations among health training institutions in the State. The professional expertise developed on the Worcester campus should become the basis for extensive outreach

services, and the growth of the Worcester campus should be planned with these services in mind.

One matter which deserves particular stress is the emerging need for rationalization of the growing number of health training programs. With the community colleges moving strongly and appropriately to develop programs for nurses and for medical technicians, and with the state colleges contemplating a move into the health care field at the undergraduate level, all added on to existing programs of various kinds in the private medical schools, the need for coordination and clear differentiation of mission is growing. Future manpower needs need to be identified clearly to ensure the most efficient use of limited resources, and the educational programs of various schools must be made more compatible so that training undertaken, for instance, in the community colleges can be accepted in the medical training programs of other schools if the community college student wants to continue his or her studies. As the public medical school in the Commonwealth, the University's Worcester campus should play a primary role in the process.

Education. We have spoken at length about the need to improve the quality and effectiveness of undergraduate instruction. But the University is not alone in facing the issue of how to serve its students more effectively. There is ample evidence that at every level of learning, from pre-school to graduate school, the quality of instruction is far too often unsatisfactory.

We believe that the University, as the leading public institution of higher education in Massachusetts, and particularly because it possesses an innovative School of Education, should be a leading force within the Commonwealth for the improvement of the quality of educational instruction.

The School of Education is already providing leadership in this area. It is helping teachers to experiment with alternative classroom settings; assisting in building career ladders for teacher aides who were on welfare before they became paraprofessionals; helping upgrade teachers whose students are mainly from low income families; working on the reform of education testing; and the list goes on.

If we have any criticism of the school's service efforts, it is that they could be identified more strongly with the improvement of education in Massachusetts. Some of the school's centers already focus exclusively on Massachusetts, so the criticism is one of degree only. Along these lines, the recent establishment of the Institute for Learning and Teaching on the Boston campus for the purpose of working with the schools of metropolitan Boston

was a constructive step which deserves the continued and active support of the University.

Nor is the University's responsibility of leadership in improving instruction confined to the elementary and secondary schools. There is a small effort at present in the School of Education to provide assistance, through workshops and conferences, to community college teachers. This program has been well received, but has been funded only on a modest scale, largely through the New England Center for Continuing Education.

We believe the University should do more in this area, that it could and should be a major resource center for innovation and improvement in the quality of teaching and curriculum at the community colleges. The community colleges do not have sufficient financial resources to engage in either the underlying research on teaching and programs that is badly needed or the actual in-service training that goes after. The Committee therefore recommends that the University take active leadership in working with the community colleges of Massachusetts, and the State colleges as well, to create interchanges which would be to mutual advantage in terms of the quality of instruction and the flow of information.

Economic Conversion and Manpower Problems. The Massachusetts economy is beset by a double problem. Not only is there the long standing need to replace jobs in the textile, leather, and fishing industries, but now also there is the problem of replacing defense-and space-related jobs. The University, through faculty and student resources in areas like Business Administration and Engineering, might be of great help in charting economic directions for the future. The Business School, in fact, has already been active in the Pioneer Valley in aiding economic conversion studies. We feel these activities are commendable and recommend that the University extend its active participation in aiding the conversion of the Massachusetts economy throughout the Commonwealth.

The School of Engineering is also relevant in this area. It has begun and should be enabled to expand a variety of activities designed to help business and government in the Commonwealth adapt to changing technology, and to foresee further change. This includes activity by market-oriented field engineers who can help with problems requiring technological resolution, publications and dissemination of relevant information using both print and audio-visual media, and work with continuing education staff on both degree and non-degree-oriented short and long courses and programs on technologically related issues.

A related problem is the dearth of information in the State on future manpower needs, a situation which must be remedied if any intelligent economic planning is to be done. While the development of such information should ordinarily be done by government agencies, the University should be prepared to assist in this process if the State so desires.

A NEW PUBLIC COMMITMENT

The actions we have called for in expanding the University's public service programs will be costly. A major portion of these costs should be financed through user fees. The University should continue to charge for short courses, conferences, workshops, and for in-service training programs at a level that will pay for the operating costs of these services. It should charge corporations and government agencies for the technical assistance it extends to them. But a program of the size and scope that we recommend will not grow by itself and cannot run by itself. Money is needed for program development and it is also essential that there be funds to serve people and groups who cannot afford to pay.

The new staff which should be added to perform these and related tasks will cost little in relative terms. Nevertheless, the legislature is likely to balk, as it has balked in the past at providing funds for continuing education, if a strong case is not made for public service.

Now that the Commonwealth has made such a substantial effort to create a public higher education system, the next step is to infuse that system with a broad public service role. We believe the case for such breadth of service, attractive as it is, has yet to be made effectively.

The Committee therefore urges the President to join with the leaders of other public institutions of higher education in Massachusetts in making a sustained effort to mobilize popular and government support for an expanded public service program in the higher education system in Massachusetts.

Organizing for Change...

SUMMARY OF MAJOR RECOMMENDATIONS

- -- The role of the Board of Trustees should be re-examined to orient it more to broad issues of policy.
- -- Governance on campus should include students in the exercise of authority and responsibility in accordance with their degree of legitimate interest in each set of issues.
- -- Self-study and evaluation staffs should be created in the President's Office and on the campuses.
- -- A program budgeting system should be instituted.
- -- The budget for fiscal 1973 should be increased by the order of magnitude of $6 to $7 million to reflect the recommendations made in this report.
- -- The University should take a greater initiative in helping to create new cooperative efforts with the other parts of the public higher education system and with private institutions, and should join in seeking to clarify the difference in mission as between the various kinds of institutions.

In the body of this report we have recommended many changes: some gradual, some immediate, some modest, some very ambitious, some for developing new attitudes, some for new bricks and mortar. We have urged the University to grow with a new image and a new role. None of this, obviously, will happen by itself. The University's evolution in the last decade has required major organizational changes. To build the public university of the future further mechanisms for change must be created.

The problem of the seventies, however, is in many ways far more difficult than that of the sixties. The size, complexity and diversity of the University of Massachusetts in 1971 make changing it a far more demanding task than was the case in 1961. The University is now, after all, among the 50 largest universities in the country. With three independent campuses and more possible, as well as satellite centers, and with the rapidly growing diversity of research, public service and study programs, the difficulties involved in giving a sense of direction and mission to the University are humbling.

DECISION-MAKING IN THE UNIVERSITY

There are a number of places within a university in which decision-making power reposes. Ultimate power within the institution is held by the Board of Trustees. There are also campus-wide units of governance which make some decisions, and there are clusters of power in departments and schools within the campuses. Cutting across the power of the various collegial bodies at the various levels is the day-to-day administrative decision-making power of the President, Chancellors, deans and department chairmen.

The appropriate distribution of power within universities has of course been a central issue of the last few years, and the controversy has brought substantial change. At the University of Massachusetts and throughout the country students are represented at all levels in ways they never were before. Faculty, too, are involved in areas of decision-making previously not within their ambit.

Nonetheless, we believe there are a variety of further changes that could enable the University to respond more effectively to new educational issues as they arise.

The Board of Trustees. As the University becomes larger and more complex, the question inevitably arises whether the Trustees can continue to govern — in a sense, manage — the University in the same fairly detailed way that they have through the past decade of development. The Trustees have been a remarkably conscientious body. The appointed members, particularly, have worked hard, coming not only to monthly meetings of the Board, but to frequent Standing Committee meetings as well.

When the University was smaller, the Trustees were in effect both planners and managers. They planned for the Boston campus and the Medical School, anticipated the need for a University-wide President and Systems Office, and at the same time concerned themselves with a myriad of details concerning the day-to-day operation of the institution.

Our main recommendation for the operation of the Board, above all others, is that the University will be best served during the seventies by a Board which concentrates on major policy issues, leaving details of elaboration and management to administrators and other decision-making bodies within the institution. The capacity of the Board to make intelligent, far-sighted judgments on questions like admissions policy, tuition, the future of the Columbia Point project, further development at Worcester, and basic academic direction will be enhanced by the extent to

which it takes the time to give full and mature consideration to these issues. That time will be available only if the Board is able to keep itself from taking time to consider questions like fees for the use of meeting rooms at the Amherst Campus Center or transfers between petty cash funds.

We realize there are statutory questions about the extent of formal delegation the Board can engage in. But the Board already stays out of dozens, even hundreds, of decisions that are made within the University daily. This de facto process of self-denial needs to become more consciously selective and disciplined.

Related to the objective of freeing time for basic policy deliberation is the standing committee structure of the Board. Under the 1966 by-laws of the Board, it has six standing committees, including the Executive Committee. At least six Trustees must serve on each one, so each Trustee is on two or three standing committees. The committees have been quite effective because some of the Trustees have been unusually dedicated. For the future, however, we think the Trustees' ability to function as a policy-making body would be improved by changing the standing committee structure to reduce the number of Trustees on each committee and supplement them with non-trustees, like the visiting committees which many universities have.

This kind of approach could help bring a highly useful outside perspective and criticism to bear on the University, and greatly broaden the information base on which the Board as a whole relies for its deliberations. Such an approach could also serve as a departure point for creating ad hoc committees to deal with particular issues. And it could be a vehicle for involving faculty and students more directly in providing information and ideas to the Board.

For the Board to function effectively it must also have effective research and informational support. The suggested standing committee changes will help here, but it is essentially the Systems Office to which the Board must look for the formulation of its agenda and for the information it needs. One reason why the Board has set up to now been unable to free itself from some of the extraneous detail is because the Systems Office has not had the staff capacity to sift and select adequately among the many items which percolate up through the administrative hierarchy of the campuses. This has begun to change on the financial-budgetary side, and the President's Council has helped the President in improving the agenda determination process. Nonetheless, far more needs to be done to ensure the Trustees that their time will be conserved by careful research and evaluation of the items that come before them.

If the Board should endeavor to be more oriented to dealing with major policy issues, it should also be a more publicly visible body. The law requires that all state boards and commissions meet in public, with some limited exceptions as when what is at stake is "the public security, the financial interests of the Commonwealth or its political subdivisions or of such authority, or the reputation of any person."

The Board has certainly not disobeyed the law, but our impression is that is has done less than it might have to hear directly the views of those whose lives its decisions affect — students, faculty, residents of Amherst, Columbia Point, Dorchester, Savin Hill, South Boston, and Worcester, and citizens of the Commonwealth generally. Some of this kind of exposure would be facilitated by the standing committee changes we have suggested, but we urge the Trustees to consider other ways to make themselves more accessible to the people of the state. We are mindful that such an approach may engender controversy and even demagoguery, but we think it will more surely ensure an ultimate mutuality of understanding between the University and the people.

Finally, we believe the ex officio membership of the Board should be re-examined. With the recent reorganization of the state government, there is a serious question whether the present ex officio structure, including the Commissioners of Education, Agriculture, Public Health, and Mental Health, is still appropriate.

Governance on Campus. Not surprisingly, the subject of governance on the campuses of the University has been the subject of considerable recent discussion and some action. At Amherst a series of faculty/student/administration efforts have produced a draft constitution for a unicameral campus-wide senate, the ultimate fate of which is still uncertain. At Boston such a campus-wide senate is now in temporary existence until governance mechanisms for Colleges I and II are developed and put into effect. Worcester is still small enough to have the luxury of "town meeting" style governance.

We find the draft Amherst constitution to be a constructive document. It recognizes that students have an interest in the decision-making process, and that the extent of that interest varies from issue to issue, being greater with reference to issues like dormitory living and less but still existent with reference to curriculum and academic policy.

Universities are complicated institutions to characterize for purposes of deriving an ideal system of governance. They are not polities like a municipality. Their constituent elements have no inherent moral or constitutional "rights," and their constituencies

are not similarly situated as the citizens of a democracy theoretically are. What is clear is that faculty, students and administrators all have interests, and we believe sound educational and administrative policy suggests that the interests of all be represented in the campus decision-making process. The difficulty is to examine the balance of interests on an issue-by-issue basis, and to develop accordingly an issue-by-issue balance of power and responsibility. In some areas students should have effective control, in others voting participation. The Amherst draft constitution attempts this balancing process for the over-all membership of the Senate and for each of its committees. One can disagree with the particular ratios chosen, but we believe the basic effort was in the right direction. We trust that consideration and discussion of it will proceed.

Decision-making power on campus also reposes at the department level and, at Amherst, in the dormitories. Considerable effort has already been made to involve students on departmental committees of various kinds at both Amherst and Boston, and somewhat more responsibility has been decentralized to student dormitory governance at Amherst. We endorse these trends, and urge that steps be taken to make them campus-wide in their application.

If students should have greater representation, there is also a question whether the views of faculty are adequately solicited, at least at Amherst. The conscientiousness of faculty and the responsiveness of administrators at Boston have combined to ensure that the faculty's views are very well known there, but the size and growth rate of Amherst have complicated the situation on that campus. The administration there has begun to move to engage in greater informal consultation with faculty on relevant issues, and we hope that activity will be expanded.

The Role of the President. The President is also, obviously, a key force in the decision-making structure of the University. Yet his role and the determinants of his effectiveness are far less rooted than the "legislative" bodies in particular attributes of structure. Structure is meaningful, to be sure: enough staff, a program budgeting system, and self-study and evaluation mechanisms are structural items that will help the President carry out his responsibilities more effectively.

But the President's role is enormously varied, especially in a multi-campus system. He is part leader, part diplomat, part broker, part manager, part negotiator, part cajoler, part commander, part spokesman, and part of many other things as well.

To the public he is spokesman for the University and for

much of higher education in the State as well. His leadership will help determine the direction and extent of public support not just of the University but also of much of the rest of higher education. If the University is to be re-created as a "university of the public interest," in William Arrowsmith's phrase, it is the President more than anyone else who will have to lead the way in persuading the Commonwealth that an investment in this direction is wise.

Within the University the full range of descriptive words listed above is applicable. Much of the University is not his to command directly, even with Trustee approval, at least not without great potential cost to the future of the institution and his own future effectiveness. Yet there are few in the University who will not be influenced by what he says and by the various indirect mechanisms he can bring to bear to affect the allocation of resources and the like. So he is by turns as much exhorter as he is commander.

If the President can stay in touch with faculty and students, he may see his program move more quickly. But how is he to do that? He is not on any one campus, and there are established channels of communication. He doesn't want to undermine the Chancellors or the various governance bodies on the campuses. We have no mandate or competence to advise on "tactics," but we do suggest that the President form and meet regularly with an informal Academic Advisory Council, composed of faculty and students from all the campuses. This would create some healthy inter-campus discussion and comparison of notes, and would give the President a useful perspective on campus attitudes. Since the group would be wholly informal and without any power, we believe it could be created without protocol difficulty, and that it would acquire sufficient legitimacy if the President made sure that its membership represented a fair cross-section of faculty and students.

SELF-STUDY AND EVALUATION

If the University is to be capable of responding to changing public and educational needs, it is essential that sustained self-study and evaluation become permanent parts of the academic and administrative process at all levels of the University. The kind of long-range planning that this Committee is engaged in should not be a sporadic and ad hoc effort. Our vision is limited, and although we feel we have set some sound directions for the

future, the University will not become the kind of self-renewing institution we would wish it to be if the plans we suggest and changes once made are not subject to continual evaluation and reappraisal.

For effective planning is a process, not a product. Means must be established to review continually the University's goals and programs to assure that its missions are being effectively carried out.

To this end we recommend that there be established within the Office of the President a staff capacity for long-range planning and University self-study and evaluation. What is essential here is a far larger flow of information to the President — evaluative studies, faculty and student questionnaires, visiting team reports, and so on. Information of this kind will also be useful to the Board of Trustees in fulfilling the broader policy role we have urged upon them.

Similarly, each Chancellor should establish in his office an academic planning and self-study capability. The Chancellor's planning and self-study staff should be responsible for program evaluation, for the identification of areas needing change, and for the suggestion of program innovations and policy changes. It should have an adequate staff and budget to engage in good program evaluation, and it should have some limited funds at its disposal for incentive or seed money as well.

The planning and self-study staffs at both the President's and Chancellors' levels could be composed in part of rotating faculty members. This could serve several purposes. It could help prevent a rift between "educational planners" and the teaching faculty. It would give faculty members so inclined an opportunity to express through a different channel their ideas and knowledge in the area of education and reform. And it could provide the University a constant flow of new ideas and new perspectives, particularly if some of the adjunct faculty were encouraged to enter this function. Nor should students be excluded from these activities. What students may lack in worldly wisdom about the problems of academic reform, they can more than make up for in enthusiasm, different perspectives, and a different set of priorities.

PROGRAM BUDGETING

Budgeting and financial controls can be powerful and effective management tools. One of the chief benefits that should derive from organizing the University as a system is an improved ability

to judge the relative importance of the University's many programs. However, the kind of budget documents which the University has traditionally prepared are of relatively little aid in making intelligent educational policy choices. The present budgeting and financial accounting systems, which reflect legislative and state accounting practices, provide too much information that is irrelevant and too little that is essential for effective decision-making.

The Committee is aware that for some time the University has been developing the information and tools needed to establish program budgeting and management information systems. We commend these efforts and urge that they be made effective as quickly as possible.

Program budgeting is a technique of presenting costs so as to reflect important units of activity. At present, the costs of operating a particular department are found under the following headings: permanent positions assigned to the department; non-permanent positions assigned; an unspecified portion of common facilities like offices; costs for special laboratories; special equipment costs; an unspecified pro rata share of general administrative, facilities, and maintenance costs; contract costs, listed separately under each research contract; and probably a few other categories we have missed. There is now no effort made to aggregate these costs for the whole department, or separately for graduate instruction, undergraduate instruction and research.

On a University-wide scale, this kind of accounting produces managerial chaos. How much are we spending for all counseling services? How much for all health-related research? How does the average instructional cost per FTE student compare in English and Psychology? Will it cost more to train 15 more Chemistry Ph.D's or 25 more History Ph.D.'s? These are all reasonable questions for a university President to ask, but there are now no reasonable answers.

The Committee is recommending many new programs. How will the President be able to show that the total social benefits flowing from these programs bear a favorable relation to their costs, especially in comparison to other programs? A convincing public case, to the legislature and to the taxpayers of the Commonwealth, must be made for the growing costs of the University. Yet the President is poorly equipped to show with hard data that the State is getting good value for its investment.

If the University wishes to increase its public service activities by, say, one-half, how can the President be sure how much money is needed to do this, and that when appropriated it will in fact be spent in the right ways? If the University decides to

reduce by 75% the scope of its combined activities which benefit a particular industry, what will be the real cost savings to the University, and will the President be able to identify the exact costs that should be reduced to make his decision effective? The great potential of the budget as a management tool, as a lever for changes such as these, will not be realized with the present budgeting system.

More information and a better budgeting approach are essential. The President and Trustees need facts in order to decide among competing demands within the University. They need to know the comparative costs of various units of activity within the University. Judgments about intangibles must be made, too, but they should be made in the context of as much tangible knowledge as can be developed. For not all new ideas, not all imaginative plans, not all innovations will lead equally to where the University should be. The Committee feels strongly that a clear and explicit system of resource choice and allocation must become a central part of the University's management.

THE COST OF OUR RECOMMENDATIONS

It will not be inexpensive to create the public university Massachusetts deserves. Even without our recommendations, the anticipated increases in size and the effects of inflation will probably increase the University's budget by 200 to 300 percent over ten years. Our recommendations, fully funded, might increase the 1980 total by ten percent, or, if student-faculty ratios are changed, by as much as twenty percent.

The first issue, then, is whether the basic investment will be made, let alone our suggested additions to it. The legislature has treated the University relatively well in recent years; Massachusetts' rate of increase in spending on higher education has been fifth among the states. Yet the state remains 49th among the states in its per capita spending on higher education.

We know what the competing demands are. These are hard times for state and local governments everywhere.

But the State needs its public university now as it never has before, and there is no way for that institution to maintain the quality which the people deserve without money. We can only hope that this report will help develop the necessary public support to ensure that the needed funds are forthcoming.

There are a number of key ways in which our recommenda-

tions will add to the cost of running the University. We emphasize that the actual dollar estimates we have derived are very rough, amounting to orders of magnitude rather than budgetary figures, and the figures for 1980 are of course quite conjectural. And we have listed only the larger costs. Some of our recommendations undoubtedly involve costs which we do not list here, but we believe we have listed the major items of additional cost.

First, the cost of recruitment and financial aid will rise. The President and Trustees have already decided to ask the State for an additional $4.5 million in this area for fiscal 1973, which we think is an ample initial increase. We believe, however, that our recommended emphasis on low-income students will, by 1980, cost something like $8 million more than what the University's recruiting and financial aid effort is otherwise likely to be.

Second, the cost of advising and counseling, and skill development services will rise. We estimate that the University should include an additional $1 million to $1.5 million in its budget for these activities in fiscal 1973, with the bulk of the funds to be spent on advising. By 1980 our proposals would add $5 million or more to what the University's budget in this area would be if present expenditures were simply projected for student body growth and inflation.

Third, there is a substantial cost associated with the planning, development and evaluation of our various academic recommendations, and for on-going staff to administer them. This might amount to an additional $500,000 to $1 million in the fiscal 1973 budget, and perhaps an additional $1.5 to $2 million in 1980.

Fourth, we estimate that perhaps $500,000 could usefully be added for additional support staff for faculty, mainly secretarial, in 1973, and that this might rise to an additional $1.5 million in 1980.

Fifth, expanded public service staffing and support for service to clientele who cannot afford to pay could involve an additional $500,000 in 1973, rising to an additional $2 million in 1980.

Sixth, the library and computer facilities could easily use an additional $500,000 to $1 million beyond projected increases in fiscal 1973, and this might increase to an additional $2.5 to $3 million in 1980.

Seventh, development of the Open University, or the cost of applying new technology to the University of Massachusetts, will be quite costly. Expenditures for fiscal 1973 might be quite low—perhaps $200,000—as planning begins, but the University's share in the development costs, assuming other institutions are involved and pay half the cost, might be a total of $10 million over a period of years. These should be capital funds, since the

investment will produce hardware and materials that can be used for a long period of time. Perhaps more relevant than the British experience in determining more exact projections will be the New York experience, since New York's Empire State College has in fact opened to students this fall. The actual cost in Massachusetts will vary tremendously depending on the extent of the investment in new curriculum development and technology. And we would emphasize that the project is not worth doing if the attempt is made to do it cheaply.

Eighth, and most troublesome, is the question whether any of our academic recommendations require that the over-all 15 to 1 student-faculty ratio be changed. The Board of Higher Education has recommended that the University's student-faculty ratio be changed to 12.5 to 1, a step which would add something on the order of $8 to $10 million to the University's current budget. The overall student-faculty ratio is of course not a very meaningful figure, since the actual ratio differs from school to school and department to department, and by the level of study involved.

A lower over-all ratio would provide the University with resources it badly needs for particular academic changes. It would ensure adequate support for faculty in some of our suggested activities that we know will require more concentrated faculty involvement— the new freshman year, field work in courses, problem-oriented learning, and so on. More broadly, it would lessen the extent to which graduate teaching has to be supported at the expense of undergraduate teaching at Amherst and lessen the pressure against graduate programs at Boston.

Thus, consideration of changing the overall student-faculty ratio is important, and if it could be achieved, it would be worthwhile. Perhaps, however, a selective approach would be a more realistic way to proceed in the present circumstances. We suggest, therefore, that the University seek funds for the creation of a sizeable undergraduate teaching fund to support student-faculty ratio changes on a program-by-program basis, both in new programs and existing ones.

We believe $3 million would be a fair amount for this fund in fiscal 1973, rising to $10 million in 1980. This would enable additional recruiting to begin for faculty for our suggested University professoriate, for the freshman year, for problem-oriented learning efforts, and for field study supervision.

It would also enable the hiring to proceed more easily for the adjunct faculty we have suggested.

Including faculty changes, then, we are suggesting the addition of roughly $6 to $7 million to the 1973 budget, and we are saying that our recommendations would enlarge the 1980 budget by

something like $30 to $35 million.

The only additional capital outlay cost we have estimated is the $10 million for the Open University.

We are, of course, recommending a larger overall student body than the 50,000 now contemplated, but we think these additional students can be accommodated by the "open unit" and by using existing and presently planned facilities on evenings and weekends, and during summers. That will, of course, involve added maintenance costs, and that is an item which we have not tried to estimate.

The one matter which may result in additional physical plant need is our recommendation for partial dispersal of the Boston campus, but since we did not finally recommend an exact mix as between the extent of building at Columbia Point and the extent of dispersion, it is difficult to attach an estimate to the costs involved in dispersion.

Our estimates, then, represent only additional operating costs to the University arising out of the recommendations we make, over and above the increases which will come as the present level of program reaches more students and suffers the effects of inflation.

CALENDAR FOR CHANGE

Implicit in Table I is our recommended calendar for change, at least as to those matters where additional funds are required.

For fiscal 1973, the academic year 1972-1973, we urge action in the following eleven areas:

1. Initial steps in changing recruitment and admissions procedures in order to assure the lower-income and older student representation we have stressed, with concomitant efforts, already under way, to increase financial aid resources.
2. Planning and initial implementation of academic changes we have suggested: the new freshman year; a College III of Public and Community Service at Boston; two problem-oriented learning units, in environmental problems and urban affairs, at Amherst; expanded use of field experience in course work; changes in the academic calendar and the timing of higher education opportunities; and setting aside a fund to adapt dormitories to student interests and needs, and another fund to encourage curriculum evaluation and change.
3. Steps toward changing the faculty reward system, and changed staffing and recruiting patterns as we have suggested.
4. Initial implementation of our suggestions for a greatly ex-

panded advising and counseling effort.

5. Continued efforts to modify the governance systems of the University to make them responsive to current and future needs.
6. Rationalization of public service activities and determination of directions for the future.
7. Development of academic self-study, evaluation, and planning mechanisms for the future.
8. Exploration of the "Open University" approach and the new technologies.
9. Installation of a program budgeting system for the University.
10. Re-examination of the Columbia Point construction plan, to develop the soundest educational approach to the development of facilities for the future Boston campus.
11. Initiative toward greater inter-institutional cooperation and coordination.

Some of these items for priority action will cost money. Some will not. Others may save money ultimately. The action required to pursue this eleven-point immediate agenda will have to be taken in various quarters: some by the President and Trustees, some by the faculty, students, and campus administrators and some by the elected officials of the Commonwealth.

Insofar as this agenda requires funds, we hope that action need not await fiscal 1973, i.e. that by reprogramming 1972 funds the President and Trustees will be able to start initial planning and hiring on a number of these points. Insofar as the agenda depends on faculty and other on-campus discussion and action, we hope that the report will stimulate that, and that it will proceed expeditiously.

We think these eleven points do constitute a set of priorities. Beyond them we suggest no detailed calendar of implementation. We believe that all of our recommendations are important, that all can be pursued as the decade unfolds, and that all can be implemented by 1980.

If our recommendations are implemented, the University of 1980 will have a full diversity of backgrounds in its student body, including students of all ages. Students will no longer be expected to enter at age 18 or never. There will be no fixed timetable within which a degree is to be earned, and part-time study will be encouraged, as well as time off for students to work and do community service. Academic programs will stress professional skills in conjunction with the liberal arts in new combinations. Learning and research will take place both on and off campus: in the classroom and the laboratory, in the field, and in clinical situations. Teaching will be carried on through lecture and group dis-

cussion, through experience, through packaged materials, and through electronic communication. As a consequence, the University will have many faces, some in the form of campuses, some storefront, some not associated with any building. The University and the Commonwealth will be intertwined—for learning, for research, for service. Learning will be organized along problem-centered lines as well as those of disciplines, and student self-inquiry will be encouraged by teachers from broad arenas of experience. The University will be one among many sources of post-secondary credentials. Institutions of higher education will offer many joint programs, and extensive sharing of faculties and facilities will occur.

THE UNIVERSITY AND THE SYSTEM OF HIGHER EDUCATION IN MASSACHUSETTS

The systematic development of higher education in the State is of the greatest importance for the future. Over the past decade the University needed to have relatively less concern about the other segments of the public sector and about private institutions. It was changing its role vis-a-vis the latter from doing mainly what they didn't want to do to being a full-fledged university. And the parts of the emerging public sector were too busy growing to worry too much about what the others were doing. The Willis-Harrington Act was passed, to be sure, but it has thus far not brought the order and definition to public higher education that its enactment presaged.

The University can no longer behave as though it exists in a vacuum. Its expanding activities place it in potential conflict or overlap with someone wherever it turns. Whatever the issue, whether it is transfer student policy, programs for older students, tuition policy, creation or expansion of Ph.D or graduate professional programs, or just the size of the budget, there is another institution or group of institutions that is affected by what the University does.

The Board of Higher Education is in the process of a master planning study which should help accomplish the clear differentiation of mission that is so badly needed in the public sector. The new Secretary of Education may help here, too. But it is essential that the segments of the public sector themselves spend far more time than they have in joint efforts to delineate boundaries and develop cooperative approaches to the application of resources.

First, cooperation within the public system could begin with

a joint effort to identify the State's higher education needs. The figures we cited in Chapter II on excess demand and short supply are rough estimates at best. Who is being left behind? Why? What do they do instead? And, on the other side of the coin, there is almost no information on the economic and manpower needs of the State. That could be developed cooperatively, too.

Second, a transfer student policy should be cooperatively evolved, to assure a transfer opportunity to a state college or the University for every qualified community college graduate. Cooperatively done, it could include a joint listing of transfer opportunities, joint publicity, and some kind of clearing house operation for applications and information. Equally important, cooperative effort is needed to resolve the now thorny issue of transferability of credit. Barriers within segments i.e., from one state college to another, or one community college to another should of course be dealt with internally. Each segment has to assure that its constituent schools are comparable academically with one another and that they do not artifically bar transfers from and to one another. But there are also serious problems about transferability of credit between the segments. Artificial barriers against transfer from one segment to another are all too prevalent. This is an appropriate matter for cooperative discussion.

Third, joint discussion of matters like admissions policies and approaches to low-income students would be helpful, perhaps leading to a more careful differentiation of the clientele of the various public segments.

Fourth, the matter of serving older students raises questions of differentiation as well as cooperation which should be answered jointly. Who will offer what programs for older students? Reference to the theoretical missions of the segments will help answer this question, but so also will the physical location and accessibility of individual institutions. What tuition will part-time students be charged? Will it depend on whether they are pursuing a degree? On whether their employer will pay for their tuition? These questions should be answered jointly.

Fifth, the "Open University," if it is to be practicable, must be developed cooperatively, both to assure the most efficient investment of resources and because a network of satellite centers will inevitably call on the facilities of all the segments.

Sixth, the whole question of which institution or type of institution does what needs more joint discussion. It would be helpful, for example, if the University were to discuss our proposal for two-year satellite colleges in Boston with community college officials before going ahead. For if the community college system begins to pay commensurate attention to Boston, the University

need not create any two-year satellite colleges. We have mentioned the need for joint discussion regarding programs in the health area, to avoid duplication and to assure that the over-all structure of offerings constitutes a career ladder which students may climb without artificial barriers.

There is a particular need for discussion between UMass/Boston and Boston State. With its new leadership, Boston State will begin to move into new undergraduate professional programs and new efforts to reach low-income and older students, items which could overlap with the activities of UMB. We see no reason why there should be any unnecessary overlap, but the two institutions must stay in touch to assure there is none.

Finally, the University can serve the state and community colleges more effectively than it has in the past, particularly in the matter of helping to improve the quality of teaching. We have mentioned the beginning efforts in this direction in the School of Education at Amherst, but the University might want to consider formalizing this and other cooperative activities into an Institute of Higher Education, which could be a research arm for the Board of Higher Education and on public higher education issues generally, as well as a focal point for the University's cooperative efforts.

The issues with regard to the private sector are even more complicated and more pressing. Private institutions are facing unprecedented financial problems. While the enormous expansion of public higher education is good public policy, it aggravates the financial situation of the private schools as people find it is not necessary to pay $4,000 a year for education of reasonable quality. Open admissions at the City University of New York had serious deleterious effects on institutions like Long Island University and Pace College, which are only now, belatedly, coming into focus for education administrators and elected officials in New York.

New York responded just recently by establishing a public-private higher education council for cooperative planning and coordination in the New York City area. We think a similar council is an absolute imperative in the Boston area, and that private - public planning should be instituted on a regional basis throughout the State. The effectiveness of such efforts could be minuscule, of course, if their participants do not take them seriously. Business as usual is always easier for everyone. But if there is mutual respect— if the private schools recognize that there are good reasons for low-tuition, high quality public higher education, and if the public institutions recognize that no one will be well served if private colleges are indiscriminately driven out of business— then there is a possibility of accomplishment.

Then a true complementarity for the seventies may be worked out, where the University is a full partner, a significant force in higher education, but where it nonetheless is considerate of private needs in its expansion and new program decisions.

There are a variety of specific issues which such co-ordinating councils should consider: the impact of public tuition policy in the private sector and possible ameliorative action; the possibility that empty places in private institutions will develop in coming years, and their appropriate disposition; complementarity in academic programs and what that means; sharing of physical resources where possible— classrooms, libraries, laboratories, computers, media facilities and so on; cooperative purchasing arrangements; possible consortium and contractual arrangements to broaden the range of academic choice for individual students and prevent unnecessary duplication of program as well; and the whole issue of whether and in what form the State should provide assistance to private institutions for the future.

The issues of consortia and contracting deserve additional comment. Consortia should not in general be viewed as ways to save money. They do not have a history of producing substantial savings. But, as the Five College Consortium in Western Massachusetts and the eleven college Worcester Consortium demonstrate, they are worthwhile vehicles to increase the range of program choices for students.

The Five College Consortium is by now a proven vehicle, but it needs further development to promote the sharing of physical resources in addition to the student exchange and faculty interaction which now goes on. A five College Committee, chaired by Dr. Samuel Gould, Chancellor Emeritus of the State University of New York, is at work on these matters and will report shortly.

We are especially impressed with the potential for the Worcester Consortium vis-a-vis the University, because we do not expect the Worcester campus to offer the same range of choice for its students that is available at Amherst and Boston. We find the Consortium idea more difficult to envisage in Boston with its complex of large major institutions, but the cooperative planning council which we suggest should discuss and consider consortium possibilities.

Contracting is also complicated. In Massachusetts it raises legal questions which need to be resolved, and involves policy questions regarding the large tuition differentials between public and private institutions. Nonetheless, buying into a specific program of a private institution may make sense if it avoids the building of an expensive and otherwise unnecessary public facility,

so the whole matter is one that deserves full exploration.

What the private institutions need on a large scale is money. It seems to us inescapable that some form of government aid to private higher education is essential to preserve the existence of many private colleges and universities. What needs to be developed is an equitable formula— one which does not support institutions of marginal academic quality and is consistent with continued efforts to meet the very large needs that still remain in the public sector. The University should be deeply involved in efforts to evolve such a formula.

The University cannot create its own future without being intimately concerned with the quality and availability of higher education throughout the Commonwealth. In its own interest as well as that of the public, it must do everything it can to help lead the way to clarification of missions and cooperative efforts throughout the public and private sectors. These are in some sense the overriding issues of the seventies for higher education in Massachusetts.

Minority Report

We support the overall emphasis of this report on the special responsibilities of a state university to all of its citizens. We agree with the themes of equalization of educational opportunity, diversity of programs, the centrality of teaching, the necessity of service, and the need for wise use of scarce resources.

The committee was devoted and hard working. However, there was not agreement on its purpose or its limitations, and this was a recurring subject of discussion during meetings. The committee, by virtue of its ad hoc, citizen, and advisory character, had a unique opportunity to make reasoned statements about public expectations and broad functions of a state university. But in this report it has gone beyond them to give detailed prescriptions for professional and administrative matters about which it could not be fully informed. Chapter III (The Learning Process) and parts of Chapters IV and V (Service to the Commonwealth, and Organizing for Change), are particularly subject to this criticism. In Chapter III there is an unstated assumption that faculties have not fulfilled their responsibilities to teach effectively, to teach subjects of value, to serve society, or to manage their affairs properly. Faculty members are as diverse as any large number of humans in any vocation or profession. A faculty can and should be asked to examine itself and to clarify and account for its programs and positions in order to better serve students and the public, and such an approach would be more likely to bring about effective change.

The report emphasizes the committee's belief in the principle that the liberal arts are central to a university's function. But it does not consider adequately the effect on a liberal arts education of its recommended social service and practical curriculum. The adoption of many of the proposals in Chapters III and IV would have the effect of limiting the time and attention a student could give to any learning that was not immediate and practical. They include a call for the admission of some students with a weak high school preparation and recommend that they spend considerable time in remedial work, with which we do not differ. But then they urge them to make immediate social problems the focus of their college career, and over emphasize field work training. This would tend to produce graduates with a lesser understanding of

literature, language, science, and history; less knowledge about the nature of man and his environment than the graduates of good private colleges and universities, and would create a system providing a lesser education or at least a more vocational education for those attending a state university.

Some aspects of the report are not directly relevant to the task of the committee, nor were they examined adequately at the University of Massachusetts. There are, for example, generalizations that link the public's alleged lack of confidence in universities, and by inference in the University of Massachusetts, with the cold war, the war in Southeast Asia, the foreign policy of the United States, the unemployment rate of blacks, income distribution, and "corporate, municipal, and individual behavior in polluting the environment."

The report contains a number of unnecessary and unsubstantiated generalizations. To cite a few examples: Students with ". . . no voice or responsibility in decisions that affect them . . . will be justified in questioning the seriousness of other societal appeals for their participation in wider electoral processes." "Significant portions of the diverse and sometimes conflicting constituencies of universities are dissatisfied . . ." "Knowledge no longer comes as neatly wrapped in packages called disciplines as perhaps it once did." "Existing majors tend to be organized as though the student is going on to graduate school in that field . . . stressing the academic uses of the discipline rather than how it is used to deal with problems." Undergraduate professional schools have had a "narrow, often functionless functionalism." "Academic professionalism has a kind of self-perpetuating inertia: it is what professors and departments will do as long as the University does not forcefully say what else they should be doing." Phrases such as "academic opportunism," "managerial chaos," and the "research mess" of universities are present throughout the report.

There are detailed prescriptions that are questionable. It is suggested that the way to obtain better teaching is the appointment of ". . . a teaching-oriented University professoriate, a cadre of professors whose mission at UMass will be to excel in teaching." Two major "units" or institutes are proposed for the Amherst campus in environmental and urban studies and "three or more" others soon. Yet elsewhere the report recommends that further growth at Amherst be limited. The University of Massachusetts at Boston is advised to not be concerned, in effect, with distinctions between training and higher education, and told that "it should be unnecessary to establish any Ph.D. programs at Boston for the foreseeable future." In emphasizing public service, a reorganization at the University of Massachusetts is proposed with